Waltham Forest Local Plan

Site Allocations Plan

Habitats Regulations Assessment Report

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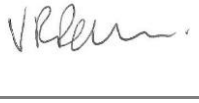
Signature		
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Executive Summary

This report presents the findings of Habitats Regulations Assessment (HRA) screening of the Waltham Forest Local Plan (Part 2) Site Allocations Document (referred to in this document as the Site Allocations Document). The Local Plan (Part 2) Site Allocations Document is being consulted on between 8 November 2021 and 14 January 2022 as a part of the Regulation 19 Preferred Options consultation.

The purpose of an HRA is to assess the significance of potential impacts of a plan on relevant European sites. Natural England has confirmed that the European sites which need to be considered in this HRA are:

- Epping Forest Special Area of Conservation (SAC); and
- Lee Valley Specially Protected Area (SPA) and the Lee Valley Ramsar site.

Detailed consultation comments on the Regulation 18 Local Plan (Part 2) Site Allocations Document HRA Report were received from Natural England and the City of London, Conservators of Epping Forest. These are appended to the main HRA Report. Regular discussions have been maintained with both parties throughout 2021 in order to address the comments raised, agree methodologies for further assessment of urban effects and the mitigation strategies being prepared for air quality and recreational pressure.

If Likely Significant Effects (LSEs) on European sites are identified in screening, measures must be put in place to avoid them. Further investigation may be necessary to understand how the plan might affect the integrity of European sites.

Screening of the Local Plan (Part 2) Site Allocations Document was first undertaken in September 2020. Since then, the HRA of Part 1 of the Local Plan (strategic policies) LP1 has progressed and changes have been made to the Local Plan (Part 2) Site Allocations Document in response to the Regulation 18 consultation. The key changes are as follows:

- One site (Chingford Station Car Park and Bus Terminal) has been removed from the Local Plan (Part 2) Site Allocations Document because the developable area is deemed to be too small for the site to be allocated;
- Five new sites have been identified for inclusion in the Local Plan (Part 2) Site Allocations Document;
- 22 sites which were considered as alternatives at the Regulation 18 stage have now been included in the Local Plan (Part 2) Site Allocations Document;
- Changes have been made to nine sites such as changes to boundaries or the use proposed on a site; and

- Amendments have been made to the site requirements and development guidelines for the other sites which were included in the Regulation 18 version of the Local Plan (Part 2) Site Allocations Document, in response to consultation comments and mitigation put forward in the separate SA.

Screening has been repeated for the Regulation 19 Local Plan (Part 2) Site Allocations Document and LSEs identified which require further investigation in HRA Task 2 i.e. Appropriate Assessment (AA). The following LSEs were identified in the HRA screening:

- Recreational pressure on Epping Forest SAC and Lee Valley SPA and Ramsar site;
- Air pollution on Epping Forest SAC; and
- Urbanisation Epping Forest SAC and Lee Valley SPA and Ramsar site.

Lee Valley SPA and Lee Valley Ramsar site

The AA has concluded that **the Local Plan (Part 2) Site Allocations Document will not result in adverse effects on the integrity of the Lee Valley SPA and Lee Valley Ramsar site in relation to changes in recreational pressures and urban effects alone and in combination.**

Epping Forest SAC

Air quality was screened in as a likely significant effect resulting from the Local Plan (Part 2) Site Allocations Document which allocates development within the borough and could therefore potentially lead to an increase in traffic and therefore air pollution. The HRA of the Local Plan Part 1 also screened in air quality resulting from the quantum of development proposed and the strategic locations outlined within Local Plan Part 1. Since then, it has been identified that potential effects on air quality would result from the quantum of development proposed in strategic locations within the borough and this has been addressed in the Appropriate Assessment stage of the Local Plan Part 1 HRA. An air quality assessment and an air quality mitigation strategy have been prepared in support of the HRAs of the Local Plan Parts 1 and 2. The air quality mitigation strategy is currently being consulted on with Natural England and the City of London, Conservators of Epping Forest. The measures set out within the air quality mitigation strategy have been modelled and the modelling concludes that the measures will be effective in reducing air pollution from transport to levels which will not cause harm to the integrity of Epping Forest SAC.[1]

[1] Waltham Forest Local Plan Habitats Regulations Assessment Air Quality Mitigation Strategy (ClearLead Consulting, July 2021) Unpublished draft.

Visitor surveys of Epping Forest have found that the entire borough falls within the Recreational Zone of Influence. The Local Plan (Part 2) Site Allocations Document would result in new homes within the Zone of Influence which is predicted to have an adverse effect on the integrity of the SAC due to increased recreational pressures.

Natural England has produced advice on the Emerging Strategic Mitigation Strategy for the Epping Forest SAC. This strategy provides a framework which enables the adverse effects on the SAC to be mitigated. The requirement to implement this mitigation framework is included within the Submission Version Local Plan Part 1. It can therefore be concluded that there is no risk of adverse effects on the integrity of Epping Forest SAC as a result of recreational pressure arising from the Site Allocations Document.

Potential adverse effects in relation to urban effects[2] on the Epping Forest SAC were also identified, as the Site Allocations Document would result in new homes located within 400m of the SAC. Policy wording has been put forward within this AA to ensure the Local Plan (Part 2) Site Allocations Document contains a mechanism to protect the SAC from urban effects once further project details are known and planning applications are considered. With the wording included with the Local Plan (Part 2) Site Allocations Document, no adverse effects on the integrity of the Epping Forest SAC is predicted as a result of urban effects arising from the Site Allocations Document.

With the policy wording mitigation in place within the Regulation 19 Local Plan (Part 2) Site Allocations Document, the supporting SANG Strategy (incorporated into a Mitigating the Impact of Development on SAC SPD) and Air Quality Mitigation Strategy, it will be possible to conclude that **the Waltham Forest Local Plan (Part 2) Site Allocations Document will not result in adverse effects on the integrity of Epping Forest SAC in relation to recreational pressures, air quality and urban effects when the Plan is assessed on its own or in combination with growth in neighbouring areas.**

[2] Defined as localized recreation from a particular allocation site, pet predation, fires, spread of disease and invasive species, littering, and fly tipping.

1 Introduction

The London Borough of Waltham Forest (LBWF) Council are in the process of preparing a draft Local Plan to guide development in the Borough. The Local Plan, when adopted, will replace the currently adopted Core Strategy for the London Borough of Waltham Forest. The Council's Local Plan is being produced in two parts. The Submission Version (known as Part 1) of the Local Plan is the overarching strategic policy document. It was submitted to the Secretary of State for Examination in May 2021.

Part 2 of the Local Plan allocates sites where the Council considers development could come forward and sets out the parameters in which these sites should be redeveloped and brought forward. Part 2 is referred to throughout this report as the 'Site Allocations Document'.

ClearLead Consulting has been instructed to undertake a Habitats Regulations Assessment (HRA) of the Local Plan Parts 1 and 2. This report is the HRA Report which considers the potential effects of the Local Plan (Part 2) Site Allocations Document. It has been updated following Regulation 18 consultation, which took place between 24 September and 10 December 2020. This HRA Report accompanies the Local Plan (Part 2) Site Allocations Document during Regulation 19 consultation. This report will be consulted on with Natural England, City of London and the public.

1.1 Habitats Regulations Assessment

In the UK, the Habitats Directive (92/43/EEC) has been transposed into domestic legislation as the Habitats and Species Regulations 2017 (as amended) which requires an assessment of any plans which are likely to have a significant effect on any protected European sites, i.e. Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar wetland sites. This is commonly referred to as a Habitats Regulations Assessment (HRA). This requirement includes strategic plans with an impact on land use.

The purpose of an HRA is to assess the significance of potential impacts of a plan on relevant European sites. The assessment should determine whether the plan would adversely affect the integrity of the site in terms of its nature conservation objectives. Where negative effects are identified, other options should be examined to avoid any potential for damaging effects.

HRA findings will feed into the parallel Sustainability Appraisal (SA) which incorporates Strategic Environment Assessment, an integral part of the plan preparation process.

1.2 Background

The London Borough of Waltham Forest (LBWF) Council are in the process of preparing a new Local Plan to guide development in the Borough. The Local Plan (Part 1), when adopted, will replace the currently adopted Core Strategy for the London Borough of Waltham Forest and will plan for development between 2020 and 2035.

The Council has aspirations for growth, including significant new housing and sustained economic growth, to provide jobs for local people and increase the supply of housing, including affordable units.

LBWF are also preparing a Local Plan (Part 2) Site Allocations Document which will form the second part of the Local Plan. The Local Plan (Part 2) Site Allocations Document allocates sites for development to assist in meeting the overall development requirements of the Local Plan (Part 1). In particular, it identifies strategic sites for future development in the Borough.

LBWF Council consulted on a Local Plan 'Direction of Travel' document in November – December 2017. The Direction of Travel document was the first stage in the engagement process with residents, businesses and other stakeholders on what the new Local Plan should contain. It presented the challenges and opportunities for the Borough and a Vision for Waltham Forest, looking ahead to what the Borough will be like in 15 to 20 years' time. The Direction of Travel document presented options for consultation, comprising six spatial strategy options for development in the Borough. These options were subject to HRA screening as well as Sustainability Appraisal (SA). The HRA screening of options identified potential significant effects in relation to all of the spatial strategy options.

Between July and September 2019, the Council consulted on a Draft Local Plan (Part 1). This Draft Local Plan (Part 1) has been subject to HRA screening and Appropriate Assessment (AA). A Regulation 19 Pre-Submission version was consulted on between October and December 2021. The AA of the Local Plan Part 1 has concluded Part 1 of the Local Plan will not result in adverse effects on European sites on the basis that mitigation strategies for air quality and recreational effects can be put in place. The mitigation strategies are under development and ClearLead Consulting Ltd and LBWF officers are working closely with Natural England and the City of London Conservators of Epping Forest in order to complete the strategies to the satisfaction of all parties.

The potential effects assessed in the AA of the Local Plan Part 1 are:

- Recreational pressure;
- Air pollution;
- Water pollution and water quality; and

- Urban effects.

These potential effects could arise from the growth that the Local Plan Part 1 will help to deliver. The AA is therefore addressing strategic issues such as a predicted increase in air pollution and recreational pressure from traffic and population growth across the borough and particularly in certain strategic locations within the borough. The AA of the Local Plan Part 1 therefore is addressing potential effects arising from the proposed quantum of development and to some extent the strategic locations. On the basis of the precautionary principle, this HRA of the Local Plan (Part 2) Site Allocations Document has also screened in recreational pressures and air quality to ensure that the AA considers whether the Local Plan (Part 2) Site Allocations Document could affect the integrity of the European sites due to the locations of the development proposed in the allocation sites. This HRA also focuses on more localised potential effects, including urban effects (e.g. fly tipping).

2 The Waltham Forest the Waltham Forest Site Allocations Document

2.1 Background to the new Waltham Forest Local Plan

Once adopted, the new Local Plan Part 2 will form the development plan for Waltham Forest along with:

- The Local Plan Part 1 – Strategic Policies, submitted for Examination in May 2021;
- The London Plan – spatial development strategy for Greater London, adopted in 2021; and
- North London Waste Plan – planning framework for waste management in partnership with other London boroughs.

2.2 Description of the Plan

The Site Allocation Document sets out what uses and development the Council would prefer to be delivered on a range of identified sites across the borough. The plan period is the same as the Local Plan Part 1 – 2020-2035. The site allocations will set out the preferred use or mix of uses as well as set out any policy criteria or guidance for the development of the site. These sites are allocated to support the delivery of the Local Plan Part 1 and the London Plan.

The Local Plan (Part 2) Site Allocations Document plan area is shown in Figure 2.1. The Local Plan (Part 2) Site Allocations Document includes:

- Proposed development site locations, for strategic development across the Borough;
- Sites associated with the delivery of essential infrastructure to support growth;
- Estimated timescales for delivery or development;
- The proposed use of potential sites i.e. for residential, employment or mixed use; and
- Specific mitigation required for the development of specific sites, and particular development constraints associated with sites.

The Council has consulted on the scope of the Local Plan (Part 2) Site Allocations Document. The public consultation was undertaken during the period March to April 2020. The Council has since prepared a Draft Local Plan (Part 2) Site Allocations Document (Regulation 18) which was consulted on between September and December 2021. Since then consultation comments have been considered and some changes have been made to the proposed site allocations. The key changes are as follows:

- One site (Chingford Station Car Park and Bus Terminal) has been removed from the Local Plan (Part 2) Site Allocations Document because the developable area is deemed to be too small for the site to be allocated;
- Five new sites have been identified for inclusion in the Local Plan (Part 2) Site Allocations Document;
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- Amendments have been made to the site requirements and development guidelines for the other sites which were included in the Regulation 18 version of the Local Plan (Part 2) Site Allocations Document, in response to consultation comments and mitigation put forward in the separate SA.

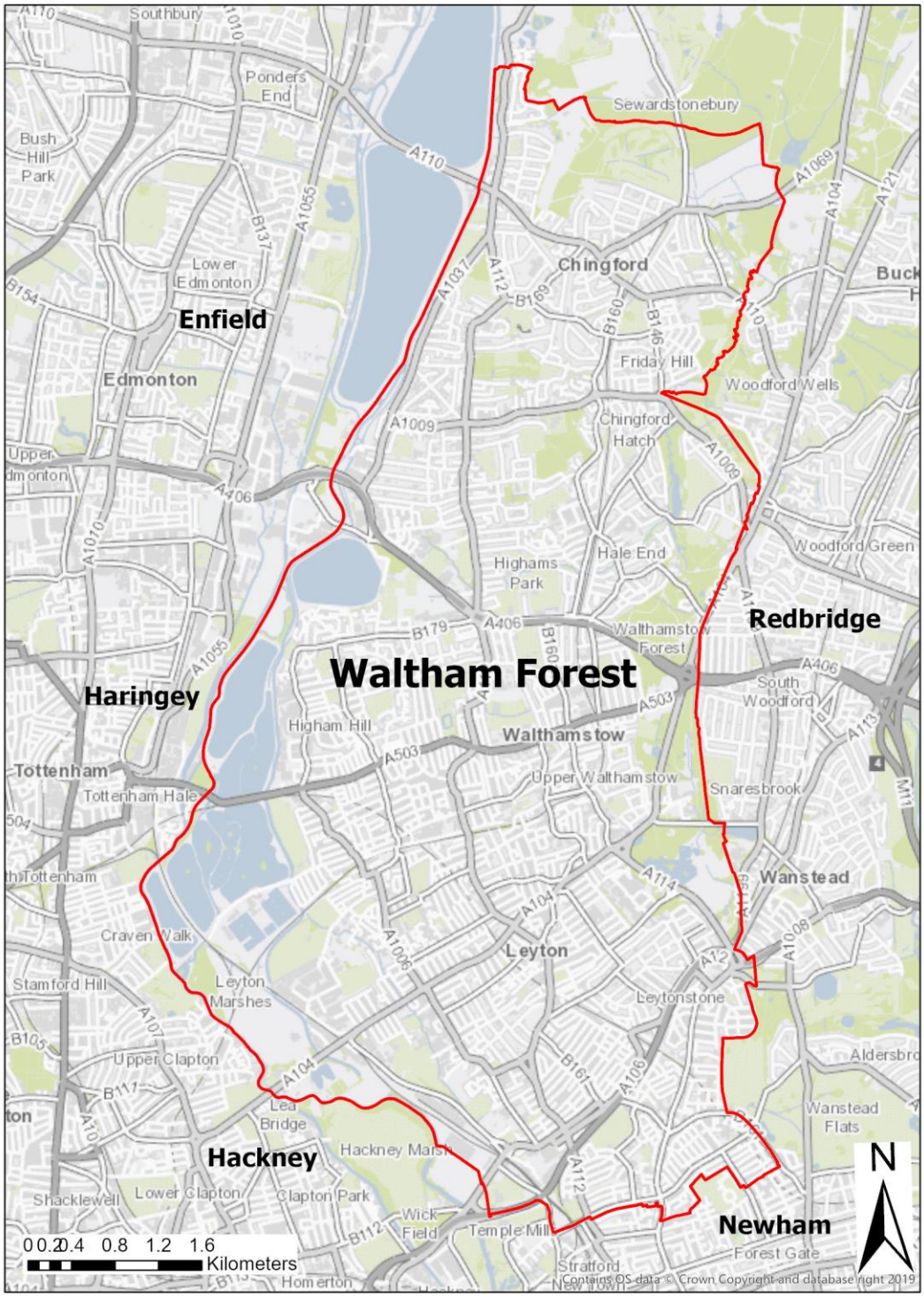

Figure 2.1: Waltham Forest Local Plan (Part 2) Site Allocations Document (Plan Area in Red)

2.3 The Main Objectives of the Site Allocations Document

The Local Plan Part 1 sets out strategic policies and development management policies for delivering development across the borough. The Site Allocations Document forms Part 2 of the Local Plan and sets out where strategic development will be delivered across the borough over the plan period 2020-2035. These two documents should be read together.

2.4 Plan Vision and Objectives

There are no separate vision or objectives for the Local Plan (Part 2) Site Allocations Document. These are set out within the Local Plan Part 1 and are reproduced here in order to set the context of the Local Plan (Part 2) Site Allocations Document. The Local Plan Part 1 (Submission Version) vision and objectives are reproduced in Boxes 2.1- 2.3:

Box 2.1: Waltham Forest Local Plan Six Golden Threads

The Local Plan sets out the strategic priorities for development of the Borough over the next 15 years. There are five golden threads that shape the Local Plan; these will deliver the priorities set out in Council's Creating Futures corporate strategy. These are as follows and are all considered to have equal value.

Six Golden Threads

- Increasing housing and affordable housing delivery. Creating liveable places
- Ensuring growth is sustainable and supported by infrastructure
- Building on the unique strengths of the Borough and carrying forward its cultural legacy
- Promoting the economy to improve the life chances for all residents, students and workers
- Protecting and enhancing the natural environment
- Ensuring land optimisation and driving investment

Box 2.2: Walthamstow Local Plan Vision

Waltham Forest in 2035

Waltham Forest is a key part of London and a rich resource for the growing capital city. Over the life of this plan, the Borough will be transformed. Building on its strengths as part of the capital and its outer fringe, by 2035, the Borough will be a network of enterprising, culturally rich, well designed sustainable neighbourhoods, building on the identities of our historic 8 town centres and the communities that have grown up around them. It will attract people from across London and further afield to enjoy its cultural, creative and heritage attractions, greenspaces and recreational opportunities.

Liveable Waltham Forest

Waltham Forest's vibrant network of distinctive and thriving town centres will be cultural community hubs, bringing the city to the suburbs and supporting creative, healthy and active lifestyles. A new vision of urban living is in place where all residents are able to meet most of their needs within a 15-minute walk or cycle from their homes. Building on the success of Enjoy Waltham Forest, the Borough's extensive network of green spaces including forest, open space, Green flagged parks, neighbourhood and pocket parks and urban space will help to connect these centres to new liveable neighbourhoods by integrated walking and cycling routes and improved public transport. These liveable neighbourhoods will include a choice and mix of genuinely affordable new homes, which along with an increasing number of local jobs will realise the Plan's ambitions to make the Borough the model of new metropolitan cultural suburbs.

Growing a creative, diverse and resilient economy in Waltham Forest

Attracting inward investment into Waltham Forest's dynamic economy is central to delivering transformational good growth and the success of this Plan. Successful growth in Waltham Forest will focus on improving life chances and job opportunities for its residents.

The Borough will maximise the advantages of its access to the most economically vibrant parts of London and its position in the UK Innovation Corridor (London-Stansted-Cambridge) to grow its own creative and cultural economy. Building on its growing and strongest sectors, Waltham Forest will be a leader in the capital's cultural, creative and digital economy, cementing its economic stability and resilience; extending its economic offer and helping residents to achieve their potential.

Waltham Forest as a place of leisure

Waltham Forest will be one of London's top locations for leisure and recreation. The Borough's diverse visitor attractions, (such as the William Morris Gallery, Walthamstow Wetlands and Victoria Halls) its places, cultural offer and green and blue assets which include access to Epping Forest, the Lee Valley Regional Park, reservoirs and marshland are for residents and all to enjoy.

A key ambition of this Plan is to promote the Borough as a vibrant place to live and visit. We aim to deliver a diverse and inclusive 24/7 economy in Waltham Forest's town centres (where appropriate) and culture venues, building a cultural legacy celebrating the creativity of the Borough's communities.

Box 2.3: Waltham Forest Local Plan Strategic Objectives

There are 15 strategic objectives that will deliver the vision for Waltham Forest by 2035, these are:

1. Ensure a significant increase in the supply, choice and mix of high quality new homes, in particular delivering genuinely affordable homes to enable and encourage residents to stay in the Borough and strengthen communities.
2. Grow, promote and diversify Waltham Forest's economy, including its dynamic, cultural, creative and digital sectors and its role in the Upper Lee Valley and wider UK Innovation Corridor, by both supporting and nurturing indigenous growth as well as attracting inward investment.
3. Improve life chances by improving job opportunities, upskilling residents and providing access to new skills, training and apprenticeship opportunities locally and elsewhere, creating wealth in a successful metropolis.
4. Support Waltham Forest's network of thriving, safe and attractive town centres, maintaining the distinctive role of each and making them accessible to all, making sure that residents are able to meet their shopping, work, service, recreational and cultural needs within a 15-minute walk or cycle.
5. Ensure timely, strategic and local infrastructure investment and delivery to support good sustainable growth for communities both now and in the future, through working with partners, investors, developers and providers.
6. Ensure that the Borough's cultural legacy and creative economy flourish and grow and investment is secured to improve life chances, quality of life and well-being for all.
7. Improve the health and wellbeing of all who live, study and work in Waltham Forest.
8. Improve active and sustainable transport choices across the Borough and beyond building on the success of the 'Enjoy Waltham Forest programme', encouraging wider integrated walking and cycling routes.
9. Promote exemplary standards of design in place-making and the highest quality of development.
10. Ensure Waltham Forest's network of cultural, inclusive and sustainable neighbourhoods are safe and diverse, celebrating their locally distinctive character and heritage.
11. Develop a multi-functional network of green and blue infrastructure to deliver benefits for all, including, where appropriate, increased public access.
12. Protect, restore and enhance the Borough's natural environment to sustain biodiversity, habitats and species of conservation importance.
13. Work with partners to protect and enhance the adjoining areas of regional, national and international natural importance in Epping Forest and the Lee Valley Regional Park.
14. Waltham Forest builds its resilience through addressing sustainability, efficient waste management and the effects of climate change through all stages in the development process.
15. To preserve and enhance the Historic built and natural environment and celebrate its locally distinctive character and heritage.

Waltham Forest is an outer London Borough in the North East of London and is one of the greenest Boroughs in London. It is also one of the most diverse areas in the country with 48 per cent of residents from a minority ethnic background and is relatively small at approximately 3,880 hectares (ha). The Local Plan area is shown in Figure 2.1 above.

The North Circular Road (A406) divides the Borough into two main areas. The London Borough of Waltham Forest was created in 1965 by bringing together the parishes Chingford, Walthamstow and Leyton. These roughly align with the geographic areas of the borough

identified in the Proposed Submission Local Plan: South (Bakers Arms, Lea Bridge, Leyton, Leytonstone, Whipps Cross); Central (Blackhorse Lane, Forest Road Corridor, St James' Quarter, Walthamstow, Wood Street); and North (Chingford, Chingford Mount, Highams Park, North Circular Corridor, and Sewardstone Road).

The Borough is a collection of neighbourhoods built up around busy high streets and stations, areas of industry and a total of 1,205ha of open space, parks and playing fields. The Green Belt in the borough is part of the Metropolitan Green Belt which surrounds London.

The southern parts of the Borough comprise Leyton, Leytonstone and Walthamstow and the northern parts comprise Chingford and Highams Park.

The Lee Valley Special Protection Area (SPA) and RAMSAR site (and Regional Park) and Epping Forest Special Area of Conservation (SAC) define its western and eastern boundaries and it sits alongside the Queen Elizabeth Olympic Park and the Stratford City development. As an area it provides a link between two major regeneration areas: The Thames Gateway and the London – Stansted – Cambridge – Peterborough corridor.

Policy 5 Management of Growth states that *"In planning for growth, the Council will seek to achieve an appropriate balance between physical, social and economic development and environmental protection".* Policy 5 also includes protecting designated sites and areas (Green Belt, Metropolitan Open Land, Special Protection Areas, Ramsar Sites, Conservation Areas, and Listed Buildings. Finally, the policy also aims to make effective use of previously developed land, except where land is of high environmental value or purposely safeguarded or protected for particular uses as identified on the Policies Map. Proposals including the redevelopment of underused and vacant land, in particular, sites listed on the Brownfield Land Register, will be prioritised.

Policy 6 is a protection policy which includes a requirement to protect and enhance existing green and blue infrastructure, including open space and leisure facilities, biodiversity and nature conservation.

Policy 7 encourages mixed-use development to be brought forward within the borough particularly in the Strategic Locations and Policy 8 supports opportunities for intensification of development involving housing and employment uses in the borough and sets out three different approaches.

The Local Plan (Part 1) also contains a range of thematic policies presented over twelve chapters which address housing delivery, economy, culture, health, community infrastructure, climate change and environment etc. Three of the thematic policies provide specific protection for biodiversity within the borough and the Lee Valley Regional Park and Epping Forest as shown in Boxes 2.4, 2.5 and 2.6.

Box 2.4: LP1 Policy 81 Biodiversity and Geodiversity

Proposals should seek to protect and enhance biodiversity and geodiversity resources in the borough and will ensure that:

A. All development should maximise opportunities to create new or make improvements to existing natural environments, nature conservation areas, habitats or biodiversity features and link into the wider green infrastructure network

B. All major development proposals are required to include a biodiversity survey of the site

C. All development proposals are required to;

- demonstrate minimising the impacts of development on biodiversity in accordance with the mitigation hierarchy;
- demonstrate a minimum 10% biodiversity net gain using the Defra Biodiversity Metric 2.0 (or subsequent version), even where development proposals do not result in biodiversity loss; and
- prepare a long-term monitoring and maintenance plan for biodiversity and habitat proposals for a minimum period of 30 years, including both on- and off-site measures.'
- demonstrate that any off-site measures proposed, seek to enhance locally and nationally important priorities;

D. Where opportunities arise, development proposals should seek to provide measures to support species and habitats through the use of landscaping on or adjacent to buildings. This may involve the inclusion of living roofs and walls and other measures (such as bird boxes) which provide space for species to nest, roost or hibernate.

E. Where vacant or derelict land is awaiting redevelopment and has some value for nature conservation, the Council will expect it to be protected on a temporary basis.

F. Development proposals will be expected to improve sensitive public access to areas of nature conservation, especially in areas of deficiency.

G. An arboricultural report must be submitted at the planning application stage where a development proposal will impact on trees. (See Policy 82)

H. Development proposals should protect and enhance the nature conservation or geological interest of nationally important wildlife sites as shown on the Policies Map.

Development proposals will not normally be granted planning permission where they pose adverse direct or indirect effects on the biodiversity or nature conservation value of any land or area within the identified Sites of Special Scientific Interest (SSSI), Sites of Importance to Nature Conservation (SINC), Special Areas of Conservation (SAC), Ramsar sites, or Special Protection Areas (SPA) without appropriate mitigation measures in place prior to development. These sites are shown on the Policies Map and include but are not limited to the Walthamstow Reservoirs Special Protection Area, Walthamstow Wetlands and Walthamstow Marshes Sites of Special Scientific Interest and Epping Forest SAC.

I. Development proposals which would cause harm to a designated site with geodiversity value will not be permitted unless any damaging impacts can be prevented by appropriate mitigation measures;

J. Development proposals which would affect a designated site with geodiversity value should seek to retain, restore and enhance the geological interest where possible.

Box 2.5: LP1 Policy 83 The Epping Forest and the Epping Forest Special Area of Conservation

The Council will protect and enhance the natural environment of the Epping Forest and its Special Area of Conservation (SAC) and seek to ensure that development proposals contribute to the avoidance and mitigation of adverse recreational and air quality effects on the SAC by ensuring:

A. All new development within the (6.2km) Zone of Influence of the boundary of the Epping Forest SAC (see Map) likely to have a significant effect on the integrity of the Epping Forest Special Area of Conservation (SAC), either alone or in combination with other plans or projects, will be required to demonstrate that adequate measures are put in place to avoid or mitigate any potential adverse effects through contribution to the mitigation of recreational and air quality impacts on the Epping Forest SAC as follows:

i. Developments of 1-99 residential units will be required to contribute to SAMMs (Strategic Access Monitoring and Management Strategy) in line with current mitigation measures agreed with the Conservators of Epping Forest and partner local authorities. Larger schemes will be required additionally to contribute to the mitigation of development impacts on the SAC via the provision of SANGS (Suitable Alternative Natural Green Space) as set out in the Council's SANGS Strategy and Mitigating the Impact of Development on SAC SPD;

ii. Developments of 100+_ units within the borough will be required to contribute to the mitigation of development impacts on the SAC via the provision of SAMMS/SANGS (Suitable Alternative Natural Green Space) as set out in the Council's SANGS Strategy and Mitigating the Impact of Development on SAC SPD.

B. Development proposals affecting Epping Forest should be sensitive and proportionate, delivering enhancements where possible and must not contribute to adverse impacts on ecological integrity, amenity or visitor enjoyment.

C. Planning applications for development and allocations within 500m[3] of the Epping Forest SAC must demonstrate through project level HRA that the development will not generate adverse urban effects on the integrity of the SAC.

[3] Please note that this distance is proposed to be modified to 400m as agreed with Natural England and the City of London, Conservators of Epping Forest in a meeting on 13th October 2021.

Box 2.6: LP1 Policy 84 The Lee Valley Regional Park

Proposals which affect the Lee Valley Regional Park will ensure that:

A. Development proposals include measures for the protection, enhancement and where possible, the extension of the borough's network of Green Corridors.

B. Development proposals affecting the Lee Valley Regional Park should be sensitive and proportionate, delivering enhancements where possible and must not contribute to adverse impacts on ecological integrity, amenity or visitor enjoyment.

C. Development proposals in proximity to the Lee Valley Regional Park should improve access and links to the park and its waterways.

D. Development proposals affecting the Lee Valley Regional Park must not contribute to adverse impacts on amenity, ecological integrity or visitor enjoyment; and will be expected to deliver enhancements where possible. The Council supports the Lee Valley Regional Park Authority's Park Development Framework. The contents of the Lee Valley Park Development Framework as adopted is a material consideration in the determination of planning applications.

E. Development proposals will not normally be granted planning permission where they pose adverse direct or indirect effects on any land or area identified with the Lee Valley SPA/Ramsar. Development that affects the Lee Valley SPA will contribute to the mitigation of adverse effects on the SPA.

F. Planning applications for development at Blackhorse Lane will need to be accompanied by a project level HRA to ensure the development will not generate adverse urban effects on the integrity of the Lee Valley SPA and Ramsar.

3 Methodology

Figure 3.1 sets out the HRA process.

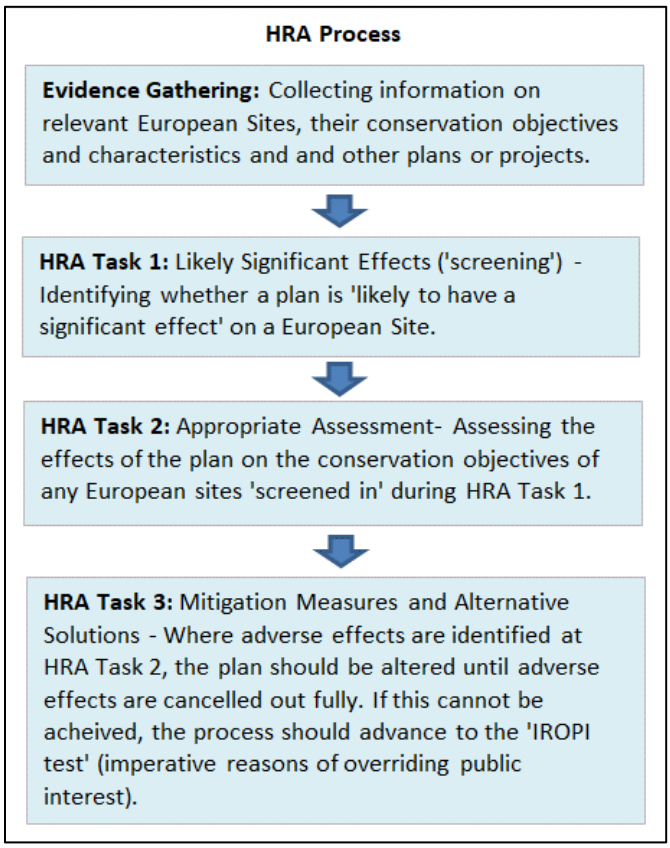
HRA Process
Evidence Gathering: Collecting information on relevant European Sites, their conservation objectives and characteristics and and other plans or projects.
HRA Task 1: Likely Significant Effects ('screening') - Identifying whether a plan is 'likely to have a significant effect' on a European Site.
HRA Task 2: Appropriate Assessment- Assessing the effects of the plan on the conservation objectives of any European sites 'screened in' during HRA Task 1.
HRA Task 3: Mitigation Measures and Alternative Solutions - Where adverse effects are identified at HRA Task 2, the plan should be altered until adverse effects are cancelled out fully. If this cannot be acheived, the process should advance to the 'IROPI test' (imperative reasons of overriding public interest).

Figure 3.1 The HRA Process

During screening, the 'Precautionary Principle' needs to be applied: if an effect cannot be ruled out based on objective information it has been reported as "likely". Furthermore, a judgement[4] by the Court of Justice of the European Union (People Over Wind) ruled that Article 6(3) of the Habitats Directive[5] must be interpreted as meaning that mitigation measures (referred to in the judgment as measures which are intended to avoid or reduce effects) should be assessed within the framework of an AA and that it is not permissible to take account of measures intended to avoid or reduce the harmful effects of the plan or project on a European site at the screening

[4] http://curia.europa.eu/juris/document/document.jsf?docid=200970&doclang=EN

[5] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

stage. The screening exercise must therefore consider elements of the plan without any proposed mitigation.

If Likely Significant Effects (LSEs) on European sites are identified in screening, measures must be put in place to avoid them. Further investigation may be necessary to understand how the plan might affect the integrity of European sites i.e. HRA Task 2 (AA) and to develop effective avoidance and mitigation measures (or consider mitigation measures already proposed in relation to projects). Full mitigation details are not required within a plan level HRA, as confirmed by a judgement[6] at the Court of Appeal (No Adastral New Town) which ruled that mitigation measures do not need to be considered in as much detail as the available information permits, but instead only be sufficient '*to be satisfied as to the achievability of the mitigation in order to be satisfied that the proposed development would have no adverse effect*'.

The following guidance has been referred to in undertaking the HRA:

- English Nature (2006) draft Guidance – The Assessment of Regional Spatial Strategies and Sub-regional strategies under the provisions of the Habitats Regulations;
- Scottish Natural Heritage (January 2015) Habitats Regulations Appraisal of Plans Guidance For Plan-Making Bodies In Scotland Version 3.0 originally prepared by David Tyldesley and Associates;
- Department for Communities and Local Government (August 2006) Planning for the Protection of European Sites: Appropriate Assessment. Guidance for Regional Spatial Strategies and Local Development Documents. Draft; and
- Habitats Regulations Assessments: Protecting a European site (February 2021). Government Guidelines[7].

3.1 Evidence Gathering

With reference to Figure 3.1, the evidence gathering task was completed in 2017. ClearLead Consulting wrote to Natural England in July 2020 to confirm the scope of the Habitats Regulations Assessment (HRA) of the Local Plan (Part 2) Site Allocations Document. Natural England

6 https://www.eastsuffolk.gov.uk/assets/Planning/Suffolk-Coastal-Local-Plan/Core-Strategy-and-DMP/No-Adastral-New-Town-Ltd-v-SCDC.pdf

7 https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site website accessed 18 October 2021

responded[8] confirming that the European sites which need to be considered in the HRA of the Local Plan (Part 2) Site Allocations Document are:

- Epping Forest SAC; and
- Lee Valley SPA and the Lee Valley Ramsar site.

These sites are shown in Figure 3.2. Appendix A presents a summary of the site designations, qualifying features and site sensitivities. This information has been obtained from:

- Joint Nature Conservation Committee (JNCC) website www.jncc.gov.uk;
- Multi-Agency Geographical Information Centre (MAGIC) website www.magic.gov.uk; and
- Natural England site improvement publications.

As the HRA progressed into Appropriate Assessment, further consultation has been undertaken with Natural England on the scope of assessments. Email correspondence with Natural England in July 2020[9] confirmed that it is only sites adjacent to Lee Valley SPA and Ramsar site which could result in an LSE in relation to urban effects and recreation. This information has been used to determine an appropriate buffer zone of 50m around the SPA and Ramsar (refer to Section 3.2). Site allocations within a 50m buffer zone were therefore identified as having a potential LSE due to urbanisation and recreational pressures (refer to Section 3.2).

A meeting was held with Natural England and CoL on 13th October 2021 in which it was agreed that the urban effects assessment in relation to Epping Forest SAC should consider only allocation sites within 400m of the European site. This zone was agreed on the basis that parts of Waltham Forest adjacent the SAC are heavily urbanised. Site Allocations over 400m from the SAC would be separated by roads and other built-form and therefore present no credible risk of urban effects.

[8] Email from Natural England dated 12/08/20

[9] Email from Natural England dated 02/07/20

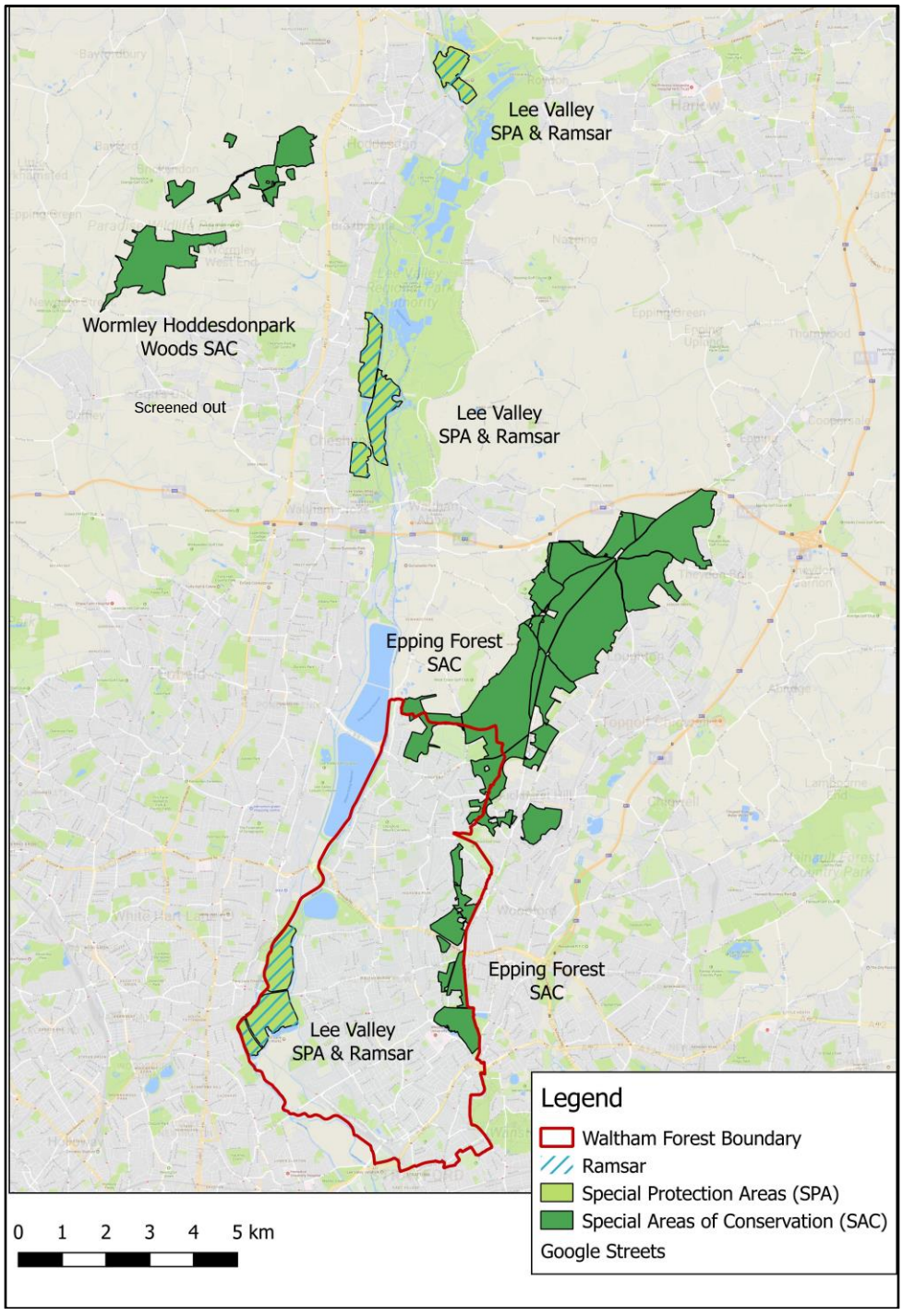

Figure 3.2: European sites in and near to the London Borough of Waltham Forest

3.2 Screening

Screening of the proposed site allocations has been undertaken at the Regulation 18 stage in September 2020 and at the Regulation 19 stage in October 2021. At both stages, the allocation sites have been proposed for mixed residual and commercial uses (residential and flexible workspaces), intensification of current industrial uses or for specific uses like a medical centre or retail.

The screening methodology identified whether LSEs could arise from the development of each site in relation to it's location and proposed use. The information on key factors affecting site integrity and objectives to ensure favourable condition status of the European sites presented in Appendix A has been referred to in all screening exercises.

The definition of an LSE adopted for this HRA is as follows and has been taken from HRA guidance[10]:

"*A likely effect is one that cannot be ruled out on the basis of objective information. The test is a 'likelihood' of effects rather than a 'certainty' of effects. Although some dictionary definitions define 'likely' as 'probable' or 'well might happen', in the Waddenzee case the European Court of Justice ruled that a project should be subject to Appropriate Assessment "if it cannot be excluded, on the basis of objective information, that it will have a significant effect on the site, either individually or in combination with other plans and projects*".

In order to screen sites, a Geographical Information System (GIS) was used to identify:

- Proposed allocation sites within 400m of Epping Forest SAC which have a potential LSE due to urbanisation;
- Proposed allocation sites within 50m of Lee Valley SPA and Ramsar site which have a potential LSE due to urbanisation and recreational pressures; and
- Proposed allocation sites within the Natural England Recreational Disturbance impact risk zone[11] for Epping Forest SAC which have a potential LSE due to recreational pressures.

A 6.2km 'Recreational Zone of Influence' around Epping Forest SAC was also identified which was similar to Natural England's Recreational Disturbance impact risk zone. Both zones encompassed all of the LBWF.

[10] Scottish Natural Heritage (January 2015) Habitats Regulations Appraisal of Plans Guidance For Plan-Making Bodies In Scotland Version 3.0 originally prepared by David Tyldesley and Associates.

[11] Accessed via the Multi-Agency Geographical Information Centre (MAGIC) website www.magic.gov.uk

The screening of proposed site allocations in the Regulation 19 Local Plan (Part 2) Site Allocations Document has identified a number of LSEs which would require further investigation in HRA Task 2 i.e. Appropriate Assessment (AA). The AA therefore needs to consider the following impact pathways:

- Recreational pressure on Epping Forest SAC and Lee Valley SPA and Ramsar site;
- Air pollution on Epping Forest SAC; and
- Urbanisation Epping Forest SAC and Lee Valley SPA and Ramsar site.

The findings of the screening exercise are presented in Section 4 of this report. Section 4 has been updated so that it reflects the Regulation 19 draft Local Plan (Part 2) Site Allocations Document.

3.3 Appropriate Assessment

The AA of the Local Plan (Part 2) Site Allocations Document examines whether there is a risk of adverse effects on the conservation objectives on the European sites as a result of the impact pathways identified during screening (see section 3.2).

The effect of each of the impact pathways on each European Site is examined in detail within Section 5 onwards. Published research/documents relating to the potential impact pathway and the relevant European site was used within each AA topic section to assess adverse effects. Where a risk of an adverse effect on a European Site is identified as a result of the Local Plan (Part 2) Site Allocations Document then changes to allocation policy wording is proposed to avoid adverse effects occurring (HRA Task 3).

Where appropriate, in combination effects have been considered with regards to each of the potential impact pathways identified above. Where the potential for in combination effects with other plans was identified, the scope of the AA was broadened to assess the possible combined effects of plans in the wider area. These effects are considered in each AA topic section. Where the AA found that the Local Plan (Part 2) Site Allocations Document would have no effect at all on the European Site as a result of an impact pathway then an adverse effect in combination is ruled out and no further assessment is required. This approach is in accordance with established case law (Foster and Langton[12]).

[12] R (Foster and Langton) v Forest of Dean DC and Homes and Communities Agency [2015] EWHC 2648 (Admin) Cranston J

Details of plans and projects used to inform the in combination assessment of effects within each topic chapter are listed in Appendix 2.

3.4 Consultation

The Regulation 18 draft of the Local Plan (Part 2) Site Allocations Document and the accompanying HRA Report were consulted on widely, including with the public, between September and December 2021. Natural England and the City of London, Conservators of Epping Forest, provided detailed responses which are reproduced in Appendix 3. Since January 2021, regular communication has been maintained between ClearLead Consulting Ltd, LBWF officers, Natural England and City of London representatives. Meetings have discussed the comments raised in December 2021 on both the LP1 and Local Plan (Part 2) Site Allocations Document HRA Reports, the methodology for the urban effects assessment in this HRA and the content and approach to the air quality and recreational effects mitigation strategies being prepared in support of the LP1 HRA. Meetings are referenced in Appendix 3 and are listed below:

- 13 January 2021: Call to discuss the consultation comments received in December 2020 from Natural England and City of London Conservators of Epping Forest;
- March 2021: Call to discuss SANGs strategy and present initial set of sites to Natural England and City of London Conservators of Epping Forest;
- 17 March 2021: Follow up call with Natural England and City of London Conservators of Epping Forest to discuss mitigation progress and urban effects and monitoring;
- 21 April 2021: SANGs site visit with Natural England and City of London Conservators of Epping Forest;
- 7 July 2021: Call to discuss mitigation strategies (SANGs and Air Quality) with Natural England and City of London Conservators of Epping Forest; and
- 13 October 2021: Call to discuss Local Plan (Part 2) Site Allocations Document urban effects assessment with Natural England and City of London Conservators of Epping Forest.

As a result of the consultation comments received in relation to the Regulation 18 Local Plan (Part 2) Site Allocations Document HRA Report (September 2020), the methodology for the assessment of urban effects was altered and subsequently agreed with Natural England and City of London.

3.5 Assessment Limitations

Following a detailed air quality assessment concluded in May 2021, an air quality mitigation strategy has been prepared in draft and is currently being consulted on with Natural England and the City of London Conservators of Epping Forest. Further work may be required on the mitigation strategy once consultation with Natural England has concluded and before the air quality mitigation strategy can be published.

Equally, a strategic mitigation strategy for Epping Forest SAC is being developed in partnership with Natural England, City of London Conservators of Epping Forest, LBWF and other neighbouring authorities. This strategy is still being agreed at the time of writing. A Suitable Alternative Natural Greenspace (SANG) strategy and Mitigating the Impacts of Development Supplementary Planning Document (SPD) are also being prepared by LBWF. This HRA relies upon the mitigation set out within the air quality mitigation strategy and the SANG strategy.

4 Screening Findings: Regulation 19 Site Allocations Document

4.1 Introduction

The proposed site allocations within the Local Plan (Part 2) Site Allocations Document were screened in October 2021. LSEs were identified in relation to the following:

- Potential LSEs on the Epping Forest SAC and the Lee Valley SPA/Ramsar due to increased general recreational pressures;
- Potential LSE on the Epping Forest SAC through an increase in traffic and therefore air pollution; and
- Potential LSEs on the Epping Forest SAC and Lee Valley SPA/Ramsar from ‘urban effects’.

Table 4.1 Screening Results				
Site Ref	**Site Name**	**Screening of European Sites for Likely Significant Effects**	**Epping Forest SAC**	**Lee Valley SPA and the Lee Valley Ramsar**
SA01	Leyton Mills Retail Park	Screened in - LSE	Recreation and air quality	None
SA02	New Spitalfields Market	Screened in - LSE	Recreation and air quality	None
SA03	Auckland Road LSIS	Screened in - LSE	Recreation and air quality	None
SA04	The Score Centre	Screened in - LSE	Recreation and air quality	None
SA05	Lea Bridge Gas Holders	Screened in - LSE	Recreation and air quality	None
SA06	Lea Bridge Station Sites	Screened in - LSE	Recreation and air quality	None
SA07	Former Leyton F.C. Football Ground	Screened in - LSE	Recreation and air quality	None
SA08	Church Road, Estate Way LSIS	Screened in - LSE	Recreation and air quality	None
SA09	Low Hall Depot	Screened in - LSE	Recreation and air quality	None
SA10	Leyton Leisure Lagoon	Screened in - LSE	Recreation and air quality	None

Table 4.1 Screening Results				
Site Ref	**Site Name**	**Screening of European Sites for Likely Significant Effects**	**Epping Forest SAC**	**Lee Valley SPA and the Lee Valley Ramsar**
SA11	Tesco, Bakers Arms	Screened in - LSE	Recreation and air quality	None
SA12	Stanley Road Car Park	Screened in - LSE	Recreation and air quality	None
SA13	806 Community Place, High Road, Leyton	Screened in - LSE	Recreation and air quality	None
SA14	Leyton Bus Depot	Screened in - LSE	Recreation and air quality	None
SA15	The Territorial Army Centre	Screened in - LSE	Urbanisation, recreation and air quality	None
SA16	Whipps Cross University Hospital	Screened in - LSE	Urbanisation, recreation and air quality	None
SA17	Joseph Ray Road	Screened in - LSE	Recreation and air quality	None
SA18	Church Lane Car Park, Leytonstone	Screened in - LSE	Recreation and air quality	None
SA19	Tesco, Leytonstone	Screened in - LSE	Urbanisation, recreation and air quality	None
SA20	Matalan, Leytonstone	Screened in - LSE	Recreation and air quality	None
SA21	Avenue Road Estate and Thorne Close	Screened in - LSE	Recreation and air quality	None

Table 4.1 Screening Results				
Site Ref	**Site Name**	**Screening of European Sites for Likely Significant Effects**	**Epping Forest SAC**	**Lee Valley SPA and the Lee Valley Ramsar**
SA22	Cathall Road Leisure Centre, The Epicentre Community Centre, Jubilee Centre (Also known as Leytonstone Leisure Centre & West Community Centre)	Screened in - LSE	Recreation and air quality	None
SA23	B&M Site	Screened in - LSE	Recreation and air quality	None
SA24	Norlington Road Sites	Screened in - LSE	Recreation and air quality	None
SA25	Walthamstow Central Bus Station	Screened in - LSE	Recreation and air quality	None
SA26	The Mall	Screened in - LSE	Recreation and air quality	None
SA27	St James Quarter	Screened in - LSE	Recreation and air quality	None
SA28	High Street Sainsbury's	Screened in - LSE	Recreation and air quality	None
SA29	Wilko's, Walthamstow High Street	Screened in - LSE	Recreation and air quality	None
SA30	Osbourne Grove	Screened in - LSE	Recreation and air quality	None

Table 4.1 Screening Results				
Site Ref	**Site Name**	**Screening of European Sites for Likely Significant Effects**	**Epping Forest SAC**	**Lee Valley SPA and the Lee Valley Ramsar**
SA31	Stow Car Wash & Valeting and Walthamstow Trades Hall	Screened in - LSE	Recreation and air quality	None
SA32	153 -154 Blackhorse Road	Screened in - LSE	Recreation and air quality	None
SA33	1 Blackhorse Lane	Screened in - LSE	Recreation and air quality	None
SA34	Webbs Site	Screened in - LSE	Recreation and air quality	None
SA35	59-69 Sutherland Road	Screened in - LSE	Recreation and air quality	None
SA36	Wood Street Families and Homes Hub	Screened in - LSE	Recreation and air quality	None
SA37	Fellowship Square (Town Hall Campus)	Screened in - LSE	Recreation and air quality	None
SA38	Sterling House, Willow House and Homebase	Screened in - LSE	Recreation and air quality	None
SA39	Hylands Road Phase 1 and 2	Screened in - LSE	Urbanisation, recreation and air quality	None
SA40	Crown Lea	Screened in - LSE	Urbanisation, recreation and air quality	None

Table 4.1 Screening Results				
Site Ref	**Site Name**	**Screening of European Sites for Likely Significant Effects**	**Epping Forest SAC**	**Lee Valley SPA and the Lee Valley Ramsar**
SA41	Wood Street Station Site	Screened in - LSE	Recreation and air quality	None
SA42	Travis Perkins	Screened in - LSE	Urbanisation, recreation and air quality	None
SA43	Brandon Road Car Park	Screened in - LSE	Recreation and air quality	None
SA44	Priory Court	Screened in - LSE	Recreation and air quality	None
SA45	234-240 Billet Road	Screened in - LSE	Recreation and air quality	None
SA46	Sainsbury's Car Park and Adjacent Sites	Screened in - LSE	Recreation and air quality	None
SA47	Cork Tree Retail Park	Screened in - LSE	Air quality	None
SA48	Morrisons Supermarket and Car Park	Screened in - LSE	Recreation and air quality	None
SA49	Sainsbury's Hall Lane	Screened in - LSE	Recreation and air quality	None
SA50	Former South Chingford Library Site	Screened in - LSE	Recreation and air quality	None
SA51	Albert Corner	Screened in - LSE	Recreation and air quality	None

Table 4.1 Screening Results				
Site Ref	**Site Name**	**Screening of European Sites for Likely Significant Effects**	**Epping Forest SAC**	**Lee Valley SPA and the Lee Valley Ramsar**
SA52	Motorpoint, Sewardstone Road	Screened in - LSE	Urbanisation, recreation and air quality	None
SA53	Lea Valley Motor Company	Screened in - LSE	Recreation and air quality	None
SA54	60-74 Sewardstone Road	Screened in - LSE	Urbanisation, recreation and air quality	None
SA55	UKPN, Budgens and Gresham Works North Chingford	Screened in - LSE	Recreation and air quality	None
SA56	Chingford Library and Assembly Hall	Screened in - LSE	Urbanisation, recreation and air quality	None
SA57	North City Autos, Chingford	Screened in - LSE	Urbanisation, recreation and air quality	None
SA58	Royal Epping Forest Golf Club	Screened in - LSE	Urbanisation, recreation and air quality	None
SA59	472-519 Larkshall Road and James Yard	Screened in - LSE	Recreation and air quality	None
SA60	Shell Garage, Highams Park	Screened in - LSE	Recreation and air quality	None

Table 4.1 Screening Results				
Site Ref	**Site Name**	**Screening of European Sites for Likely Significant Effects**	**Epping Forest SAC**	**Lee Valley SPA and the Lee Valley Ramsar**
SA61	Larkswood Leisure Centre, Nursery and Land to the rear of Larkswood Leisure Centre	Screened in - LSE	Recreation and air quality	None
SA62	Pear Tree House	Screened in - LSE	Urbanisation, recreation and air quality	None
SA63	North Circular Road SIL 2	Screened in - LSE	Recreation and air quality	None
SA64	Justin Road / Trinity Way	Screened in - LSE	Recreation and air quality	None
SA65	Hainault Road	Screened in - LSE	Recreation and air quality	None
SA66	Howard Road	Screened in - LSE	Recreation and air quality	None
SA67	Barrett Road	Screened in - LSE	Recreation and air quality	None
SA68	Highams Park Industrial Estate	Screened in - LSE	Air quality	None
SA69	Blackhorse Lane SIL3	Screened in - LSE	Recreation, and air quality	Recreation and urbanisation

Table 4.1 Screening Results				
Site Ref	**Site Name**	**Screening of European Sites for Likely Significant Effects**	**Epping Forest SAC**	**Lee Valley SPA and the Lee Valley Ramsar**
SA70	Argall Avenue SIL4	Screened in - LSE	Air quality	None
SA71	Rigg Approach SIL5	Screened in - LSE	Recreation and air quality	None
SA72	Lammas Road SIL6	Screened in - LSE	Recreation and air quality	None
SA73	Orient Way SIL7	Screened in - LSE	Recreation and air quality	None
SA74	Deacon Trading Estate (Cabinet Way)	Screened in - LSE	Recreation and air quality	None
SA75	Lea Bridge Hotel Site	Screened in - LSE	Recreation and air quality	None

4.2 Screening Conclusions

As LSEs have been identified on Epping Forest SAC and Lee Valley SPA and Ramsar site resulting from the site allocations in the Local Plan (Part 2) Site Allocations Document, it is necessary to proceed to the AA stage of HRA. All proposed allocation sites within the Local Plan (Part 2) Site Allocations Document have been screened in for further assessment. The AA is presented in Sections 5 to 8 of this report.

5 Appropriate Assessment: Recreational Pressures

5.1 Introduction

Screening of the Regulation 19 Local Plan (Part 2) Site Allocations Document identified that all the proposed site allocations (apart from SA47, SA68 and SA70) because no residential use is proposed) could have a potential LSE on the Epping Forest SAC as they would result in population growth which could increase recreational pressures within this SAC.

Screening of the Regulation 19 Local Plan (Part 2) Site Allocations Document also identified that site allocation SA69 Blackhorse Lane SIL3 could result in an LSE from recreational pressures on the Lee Valley SPA and Ramsar as it could result in new residential development within 50m of the SPA and Ramsar site.

5.2 Background

The possible effects of relevance to this assessment are as follows:

- Trampling and wear from pedestrians and cyclists leading to soil compaction/erosion and damage to veteran tree roosts, eutrophication from dog fouling, grazing challenges due to interactions between visitors and livestock, direct damage to veteran trees from climbing, damage to tree saplings effecting recruitment of new trees, harvesting, disturbance to invertebrates and other wildlife. (Please note that potential effects of fires, littering, fly tipping, spread of disease and invasive species have been considered under the issue of 'Urban Effects' in Section 9); and
- Disturbance of the bird species for which the Lee Valley SPA and Ramsar is designated (either by people or cycling).

5.3 Assessment of Effects Alone and In Combination

5.3.1 Epping Forest SAC

Current recreational pressures on the Epping Forest SAC

Epping Forest is London's largest open space which is managed by the City of London as the Conservators of Epping Forest. The Epping Forest SAC is designated for its extensive woodland, heathland and its population of stag beetles.

Epping Forest SAC is a popular destination due to its location on the outskirts of London. The forest received 4.2 million visits in 2014[13] and the City of London Corporation has concerns that high levels of people to the most popular parts of the forest are resulting in damage to vegetation and erosion of soils. Also, Epping Forest is a key mountain biking destination as it is easily accessible by train. Off-road cyclists are creating new tracks as they ride through the woodland and widening existing tracks[14] which is leading to fragmentation, degradation, soil erosion and loss of habitat continuity. Natural England's Site Improvement Plan[15] lists Public Access/Disturbance as a priority issue that is currently impacting on the condition of the SAC.

Formal visitor surveys were undertaken in 2017 and 2019 by Footprint Ecology[1617] to understand the visitor use of Epping Forest SAC. The surveys identified that 75% of visitors to Epping Forest SAC in 2017 came from within 6.176km of the forest whereas in 2019 this figure was 6.67km (and 6.36km excluding the holiday makers). The zone from which 75% of visitors originate from is considered by Natural England to be the 'Recreational Zone of Influence'[18] and any proposed residential developments within this zone are therefore considered to have a recreational impact on the SAC. Natural England have confirmed that the Epping Forest SAC Recreational Zone of Influence should currently be set at 6.2km[19]; this distance encompasses all of the London Borough of Waltham Forest.

The visitor surveys found that the median distance that people travelled to the site (i.e. half the people interviewed) was 3.1km in 2017 and 2.6km in 2019. People living within this zone were more likely to visit the site more frequently. Natural England have confirmed that 3km is considered to be the Inner Recreational Zone of Influence.

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[13] Epping Forest Management Plan (https://consult.cityoflondon.gov.uk/consult.ti/EF_Management_Plan_1/view?objectId=6711348)

[14] www.trailforks.com/region/epping-forest/?activitytype=1&z=11.9&lat=51.67006&lon=0.04019

[15] Natural England (December 2014). Site Improvement Plan: Epping Forest.

[16] Liley, D., Panter, C., Weitowitz, D. & Saunders, G. (2018). Epping Forest Visitor Survey, 2017. Unpublished report by Footprint Ecology for the Coty of London Corporation as Conservators of Epping Forest.

[17] Liley, D., (2019). Epping Forest Visitor Survey (2019). Unpublished report by Footprint Ecology for Epping Forest District Council.

[18] Natural England Interim Advice Note (March 2019). Andrew Smith – Thames Team

[19] Natural England Epping Forest SAC Zone of Influence (June 2020). Letter to Epping Forest District Council. Jamie Melvin – West Anglia Team

Effects of the Site Allocations Document on Epping Forest SAC Alone

Due to the proximity of the Borough of Waltham Forest to the Epping Forest SAC, all of the Site Allocations at which residential development is proposed within the Draft Local Plan (Part 2) Site Allocations Document would result in new homes that fall wholly or partly within 3km of the SAC which is within the Inner Zone of Influence. These Site Allocations could deliver up to 27,000 homes within this inner zone. The population growth associated with these new homes would result in an increase in recreational pressures on the Epping Forest SAC. This SAC is already under pressure from existing high levels of recreational activity and therefore, without mitigation, the additional pressures are predicted to result in an adverse effect on the integrity of the SAC.

Mitigation Recommendations for the Site Allocations Document

Natural England has produced an interim advice note on the Emerging Strategic Mitigation Strategy for the Epping Forest SAC (NE, 6th March 2019) and updated by their advice contained within the Natural England letter dated 5 March 2021[20]. This note advises that all residential development within 3km of the SAC and all development with 100 or more dwellings within 6.2km of the SAC should make a financial contribution to strategic measures as set out in the costed Strategic Access Management Measures (SAMM) provided by the Conservators of Epping Forest[21]. The proposed SAMM, which have been agreed by its members, would include measures to manage recreational pressures by encouraging users to use designated routes/areas away from sensitive parts of the Forest and monitor visitor impacts on SAC features to guide visitor management. These costings have been laid out in terms of whole forest SAMM Mitigation Measures, with a 25 year total of £17,121,594 and an in perpetuity total (125yrs) of £62,626,158. The Corporation of London considers these mitigation measures to be essential to the protection of Epping Forest SAC.

Natural England also advise that residential development with 100 or more dwellings within 6.2km of the Epping Forest SAC should provide additional mitigation to offset recreational impacts on the SAC. Natural England has set out a 'Toolbox Approach' to mitigation. The list of items that NE would find acceptable as part of the package of mitigation measures includes the following:

- Traditional Suitable Alternative Natural Greenspace (SANG), meeting the 8ha minimum standard, meeting the guidelines;

[20] Natural England Developments to the Strategic Approach relating to the Epping Forest SAC Mitigation Strategy (March 2021). Letter to the Epping Forest SAC Oversight Group. Aidan Lonergan.

[21] Conservators of Epping Forest (December 2020). Proposed Whole-Forest SAMMS Mitigation Measures.

- SANG networks, either not meeting the standard, or all of the traditional guidelines, but does provide a semi natural experience of a size greater than 2ha for the local populous
- Strategic SANG, as discussed above provided by a third party. Options to look at areas such as Olympic Park or Hackney Marshes;
- SAMM+ Contribution, directly funding a significant project from the City of London's proposed complete solution. Reducing the overall requirement strategically, but dealing with a likely acute development issue, due to size of development or proximity to the SAC;
- Offsite Public Rights of Way improvements away from the SAC. Provides an opportunity to improve accessibility to current green spaces in the London Boroughs from the new developments and beyond;
- Bespoke Wardens provided to manage visitor engagement on SANGs other green spaces in the Boroughs;
- A new Education Centre / Facility focused on managing behaviours at the SAC;
- Dog Training Areas on the site somewhere, small fenced areas where people could train their dogs, recall etc, without being on the SAC;
- Contributions to other Green Infrastructure in the vicinity (improvements to accessibility or biodiversity on them), such as opening up areas of green, removing culverts on river sections, extra habitat planting or riverside walks;
- Contribution to the City of London for something else outside of the SAMM project requirements;
- Pet Covenants on developments to ban keeping of dogs;
- Reduce access to the SAC from any particular development with physical barriers; and
- Secure measures to provide garden waste provision on site, to protect garden refuse or fly tipping on the SAC, where gardens are part of the application.

An Epping Forest SAC SANG Strategy is currently being produced by the London Borough of Waltham Forest to offset recreational effects on the SAC. The SANG Strategy will ensure that SANGs will be delivered alongside housing development in order to mitigate for increased recreational pressures on Epping Forest SAC. The SANG Strategy is being prepared in consultation with Natural England and the City of London and a site visit to the proposed SANG sites with the consultees was undertaken on 21st April 2021. The site visit confirmed potential for SANG delivery through a number of sites within the borough. An agreed strategy will be published prior to the Examination in Public of the LP1 and used as a basis for a Mitigating the Impact of Development on SAC SPD.

The SANG Strategy will provide a package of mitigation measures based on Natural England's 'Toolbox Approach'. Thirteen proposed SANG sites over 2ha have currently been identified (refer

to Figure 5.1) and the strategy aims to focus on linking these proposed SANGs with other existing green infrastructure away from Epping Forest SAC to provide a network of sites (i.e. focussing on bullet points 2, 3, 4 and 5 in the above list). The strategy would aim to provide a scheme that provides attractive alternative open spaces to Epping Forest SAC. A framework for the SANG Strategy is provided in Table 5.1 below.

Table 5.1: Framework for SANG Strategy

Details to be included within the Strategy	Description
A detailed plan of each SANG site within the borough showing the existing use of the proposed SANG, including information on the existing nature conservation interest of the site and any other constraints.	The location of these sites is shown on Figure 5.1 below. These proposed SANGs are on either new semi-natural open space or existing open space with access improvements.
A costed schedule of proposed works to improve each site thereby increasing its capacity for recreation by enhancing the visitor experience.	Details of how each SANG will be enhanced to increase visitor capacity would be undertaken in accordance with the Guidelines for the Creation of Suitable Accessible Natural Greenspace (Natural England, 2008 or subsequent version). This document sets out what each SANGs should have in order to make them attractive to visitors and would guide the design of the SANG.
Details of the types and size of each SANGs and what experience they would provide.	The strategy would aim to provide a range of types and sizes of SANG, offering a range of experiences, including larger SANG with café facilities (i.e. honey pot sites), dog training areas and possible bike parks.
Details on proposed biodiversity enhancements within the SANGs.	There is an opportunity to tie this in with the Local Plan requirement for developments to result in Biodiversity Net Gain.
An indication of current visitor levels within the sites and, where appropriate, the degree of discounting applied to reflect this (particularly in areas of existing open space to be enhanced).	Current visitor levels categorised as ‘High’, ‘Medium’ or ‘Low’ based on data collected during site visits.
A plan showing how each SANG will be linked to other SANGs or existing greenspace within	This will focus on footpaths that do not link with the SAC.

Table 5.1: Framework for SANG Strategy	
Details to be included within the Strategy	**Description**
the borough to provide a network of alternative sites.	
Details of the requirement for bespoke wardening to manage visitor engagement on SANGs and other green spaces in the borough.	NA
The location and number of dwellings each SANG could provide avoidance/mitigation for.	See Figure 5.2.
Assurance that sufficient SANG is provided in advance of occupancy of residential developments.	Further details also to be provided within the Mitigating the Impact of Development on SAC SPD.
An indication of the funding mechanism for the creation and management of the SANG in-perpetuity and who would be responsible for the management of each SANG.	Full details to be provided within the Mitigating the Impact of Development on SAC SPD.

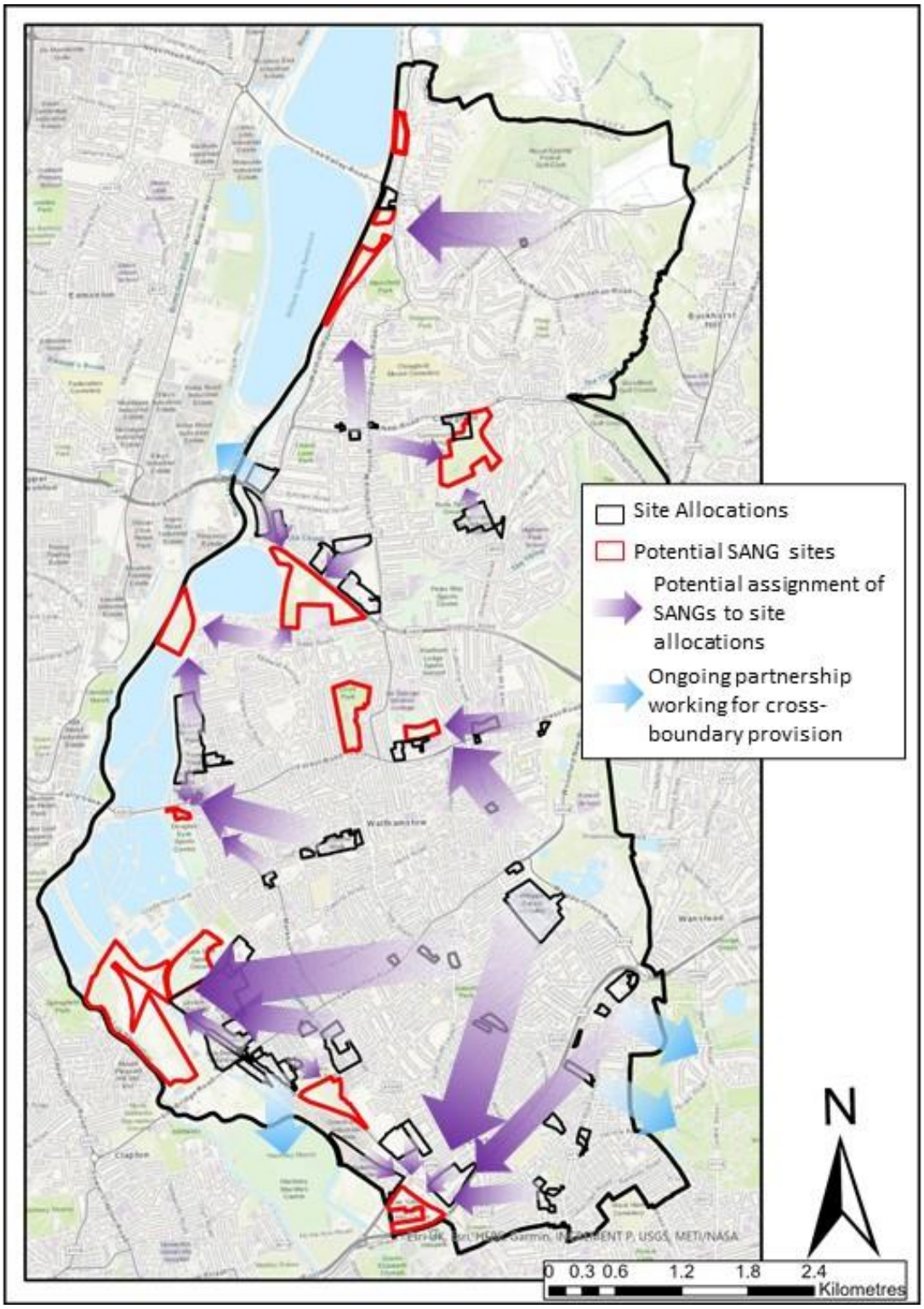

Figure 5.1: Assignment of Proposed SANGs sites with Allocation Sites

Figure 5.1 presents the relationship between the allocation sites and the proposed SANG sites, demonstrating which SANG sites would provide a facility for use by residents of the allocation sites and indicating the proportion of the SANG network assigned to each site allocation. In addition, Figure 5.1 also indicates (with the blue arrows) where partnership working is underway for cross-boundary provision with neighbouring authorities.

Policy 83: The Epping Forest and the Epping Forest Special Area of Conservation is a protection policy (refer to Box 2.5) which requires developments to contribute to a mitigation strategy to offset impacts of recreational pressures on the Epping Forest SAC. The policy and associated supporting text sets out the London Borough of Waltham Forest approach and specifically requires developments of 1-99 units to contribute to the SAMMs and developments of 100+ units to contribute to the provision of SAMMs and SANG, as set out in the Council's proposed SANG Strategy and associated SPD. Further details on contributions towards SANG and SAMM would be set out in the SPD, thereby ensuring an appropriate funding mechanism is in place to support this strategy.

The allocation sites with an indicative housing capacity of less than 100 units are listed in Table 5.2 and these sites have been excluded from Figure 5.1.

Table 5.2: Site Allocations with Indicative Housing Capacity Under 100 Dwellings

Site Reference	Allocation Name	Indicative Housing Capacity
SA10	Leyton Leisure Lagoon	90
SA12	Stanley Road Car Park	50
SA13	806 Community Place, High Road Leyton	90
SA29	Wilkos, Walthamstow High Street	90
SA30	Osborne Grove	20
SA31	Stow Car Wash & Valeting and Walthamstow Trades Hall	60
SA32	152-154 Blackhorse Road	50
SA35	59-69 Sutherland Road	20

Table 5.2: Site Allocations with Indicative Housing Capacity Under 100 Dwellings		
Site Reference	**Allocation Name**	**Indicative Housing Capacity**
SA36	Wood Street Families and Homes Hub	50
SA40	Crown Lea	90
SA41	Wood Street Station Site	15
SA42	Travis Perkins	50
SA43	Brandon Road Car Park	8
SA44	Priory Court	83
SA45	234-240 Billet Road	50
SA50	Former South Chingford Library Site	25
SA51	Albert Corner	90
SA53	Lea Valley Motor Company	15
SA54	60-74 Sewardstone Road	40
SA55	UKPN, Budgens and Gresham Works, North Chingford	15
SA56	Chingford Library and Assembly Hall	30
SA57	North City Autos North Chingford	30
SA58	Royal Epping Forest Golf Club	45
SA60	Shell Garage, Highams Park	10
SA62	Pear Tree House	33

Additional mitigation measures required for sites which are within 400m of the Epping Forest SAC are identified in Section 7 in relation to localised recreational and urbanisation effects. In these instances, developments would be required to provide a 'SAMM+' contribution in line with Natural England's Toolbox Approach to directly fund a significant project from the City of London's proposed complete solution (refer also to Section 7: Urban Effects). This may reduce the overall requirement strategically and deal with potential acute development issues of development in close proximity to the SAC. See Section 7 for further information.

Assessment of In Combination Effects

The Local Plans of the following authorities would have an in combination increase in recreational pressures to Epping Forest SAC through delivering new housing within the 6.2km Recreational Zone of Influence (refer to Appendix 2 for further information):

- Epping Forest District Council;
- Harlow District Council;
- East Hertfordshire District Council;
- Broxbourne Borough Council;
- Brentwood Borough Council;
- London Borough of Waltham Forest;
- London Borough of Redbridge;
- London Borough of Enfield;
- London Borough of Newham;
- London Borough of Haringey;
- London Borough of Hackney;
- London Borough of Tower Hamlets; and
- London Borough of Barking and Dagenham.

All these authorities are included within the Epping Forest SAC Oversight Group and Natural England has provided a framework to enable these authorities to ensure no adverse effects from recreational pressures through implementing Natural England's Emerging Strategic Mitigation Strategy for Epping Forest (dated 6th March 2019).

With the exception of the Epping Forest Local Plan, all of the Local Plans listed above have HRA which conclude that the growth in their districts will not affect the integrity of the SAC. The Epping Forest District Council (EFDC) Local Plan (Submission Version dated 2017) was found to be not sound by the Inspector during the Examination (report dated 2nd August 2019) and requires major modification. The Inspector required further details on the SANG Strategy before it can be concluded that there would be no adverse effect on the SAC as a result of an increase in recreational pressures. EFDC has prepared a SANG Strategy within their Green Infrastructure Strategy (April 2021)[22] which was agreed by EFDC at their meeting of 20 April 2021 as a material planning consideration for the preparation of planning applications. The EFDC SANG Strategy addresses the points raised by the Inspector during the Examination. The EFDC SANG Strategy

[22] Epping Forest District Council (April 2021). Green Infrastructure Strategy.

is predicted to offset the recreational pressures on the SAC and provide sufficient certainty to enable the EFDC Local Plan HRA to conclude that there would be no adverse effects on the SAC.

Following the completion of the Waltham Forest SANG Strategy, along with the EFDC's SANG Strategy and the Waltham Forest LP1 policy wording, it will be possible to conclude that **the Waltham Forest Local Plan (Part 2) Site Allocations Document will have no adverse effects on the integrity of Epping Forest SAC with regards to recreational pressure when assessed in combination with the EFDC Local Plan.**

5.3.2 Lee Valley SPA and Ramsar

Current recreational pressures on the Lee Valley SPA and Ramsar

The Walthamstow Reservoirs SSSI is a complex of ten reservoirs which form part of the Lee Valley SPA/Ramsar. The Reservoirs occur in the far west of the borough and therefore are accessible to Waltham Forest residents. The remaining component parts of the Lee Valley SPA are not considered further as they are over 5km from the borough boundary with no direct roads that run close to these component parts.

The Walthamstow Reservoirs are managed to meet the operational needs of the site's main focus as water supply reservoirs. The 'Walthamstow Wetlands Project' was completed in 2017 and was supported by an HRA to ensure it did not have an adverse effect on the integrity of the SPA/Ramsar[23]. The project has enhanced the main public access points into the site and provided new public access routes around parts of the reservoir. An access management system is in place with primary and secondary routes around the site. Seasonally restricted routes also occur which are shut off from the public during sensitive times for the rare birds that use the site. A visitor centre, café and exhibition space are located in the centre of the reservoir complex. Dogs are not permitted within the site at any times and cycling is only permitted on primary routes. Fishing and bird watching, which was previously unrestricted, is controlled by fishing and birdwatching permits which are capped to protect the reservoirs. The site is managed by dedicated wardens.

The access management system's primary requirement is to protect the sensitive bird areas within the SPA/Ramsar from recreational activities. The important bird areas were identified by extensive ornithological surveys, focussing on the shoveler, gadwall and bittern populations that are the designated feature of the SPA/Ramsar. The surveys were undertaken to support the HRA of the project and are updated annually. The results of the post construction bird surveys found

[23] BSG Ecology 2014. Part 1: Report to Inform a Habitats Regulations Assessment for the Lee Valley Special Protection Area. Walthamstow Reservoirs – Walthamstow Wetlands Project.

that bird distribution was consistent with the pre-construction baseline and the mitigation within the design of the site was effective[24].

The number of visitors to the reservoirs in 2018 was estimated to be 70,000 per annum with this number predicted to gradually increase until 2023/24 when visitor numbers are set to plateau at 180,000 per annum[25].

Effects of the Site Allocations Document on Lee Valley SPA and Ramsar

The allocation site SA69 Blackhorse Lane SIL3 could potentially increase the residential population living within 50m of the SPA and Ramsar site and could increase use of the site by the public. The potential effects of this increase in recreational pressure on the SPA/Ramsar features due to visual and/or audible disturbance is discussed below.

Dogs (with the exception of Assistance Dogs) and use of public vehicles are both not permitted within the SPA and therefore recreational activities are restricted to walkers, cyclists, anglers and bird watchers.

The access management scheme restricts public access to sensitive parts of the site during the autumn and winter to protect the populations of gadwall, shoveler and bittern. A high level of monitoring is undertaken by wardens to ensure recreational activities do not adversely impact the birds within the SPA. The results of the monitoring are provided to Natural England annually. In the event that adverse effects are identified then the access management system includes measures to enable routes to be temporarily or permanently closed by installation of additional gates or screens.

Unauthorised entry to the site through cutting gaps in the perimeter fence could potentially occur as a result of an increase in the population, if the SPA/Ramsar is accessible to residents of the proposed development at SA69 Blackhorse Lane SIL3, adjacent to this European Site. This could result in disturbance to sensitive bird areas. However, the SPA/Ramsar is separated from the site allocation by the Lee Flood Relief Channel and Thames Water security fencing. The site can only be directly approached from the south or from Forest Road. In each case robust security fencing borders the site (tall metal fence with spikes or wooden palisade fence overtopped by strands of barbed wire). It is noted that existing residential development is present within the Blackhorse Lane area and post-construction bird surveys have not recorded any adverse effects on bird distribution. It is therefore concluded that the site is not susceptible to unauthorised access due

[24] www.bsg-ecology.com/portfolio_page/walthamstow-wetlands-ornithological-survey-design-inputs-hra-support Website accessed 5 March 2020

[25] Walthamstow Wetlands Project Business Plan cited in BSG Ecology, 2014.

to proposed development at Blackhorse Lane and no adverse effect on the integrity of the SPA/Ramsar is therefore predicted.

Assessment of In Combination Effects

The access management strategy being implemented at Walthamstow Reservoirs has been specifically designed to ensure there are no impacts on the bird interest within the SPA/Ramsar and this strategy therefore already provides a mechanism to ensure no future adverse effects occur as a result of population growth in the area. Therefore, a neutral effect is predicted on the integrity of the SPA/Ramsar as a result of increased population due to the Local Plan (Part 2) Site Allocations Document. No in combination assessment of recreational pressures on the SPA/Ramsar is, therefore, required as no residual adverse effects on the integrity of the conservation objections of this European Site is predicted as a result of the Local Plan (Part 2) Site Allocations Document. The access management scheme within the SPA/Ramsar is also considered to be sufficiently robust to account for population increases from other plans or projects.

5.4 Conclusion

5.4.1 Epping Forest SAC

Epping Forest SAC is currently subject to high levels of recreational pressures which are causing damage to the habitats and erosion of soils within the site[26]. Visitor surveys of Epping Forest have found that the entire borough falls within the 6.2km Recreational Zone of Influence. The Local Plan (Part 2) Site Allocations Document would result in 27,000 new homes within the Zone of Influence which is predicted to have an adverse effect on the integrity of the SAC due to increased recreational pressures.

Natural England has produced an interim advice note on the Emerging Strategic Mitigation Strategy for the Epping Forest SAC. This strategy provides a framework which enables the adverse effects on the SAC to be mitigated. The requirement to implement this mitigation framework is included within 'Policy 83: The Epping Forest and Epping Forest Special Area of Conservation' of the Proposed Submission Version Local Plan Part 1. It can therefore be concluded that there is no risk of adverse effects on the integrity of Epping Forest SAC as a result of recreational pressure arising from the Local Plan (Part 2) Site Allocations Document.

[26] Natural England (December 2014). Site Improvement Plan: Epping Forest.

Following the completion of the Waltham Forest SANG Strategy, along with the EFDC's SANG Strategy and the Waltham Forest LP1 policy wording, it will be possible to conclude that **the Waltham Forest Local Plan (Part 2) Site Allocations Document will have no adverse effects on the integrity of Epping Forest SAC with regards to recreational pressure when assessed in combination with the EFDC Local Plan.**

5.4.2 Lee Valley SPA and Ramsar

The access management strategy being implemented at Walthamstow Reservoirs has been specifically designed to ensure there are no impacts on the bird interest within the SPA/Ramsar. This strategy already provides a mechanism to ensure no future adverse effects occur as a result of population growth adjacent the SPA/Ramsar. Therefore, **no adverse residual effects on the integrity of the Lee Valley SPA /Ramsar are predicted** as a result of recreational pressures due to the Local Plan (Part 2) Site Allocations Document either alone or in combination.

6 Appropriate Assessment: Increased traffic on air quality

6.1 Introduction

Screening of the Local Plan (Part 2) Site Allocations Document identified that all the proposed site allocations (SA01 to SA75) could increase traffic and therefore air pollution and result in an LSE on the Epping Forest SAC.

Screening of the Local Plan (Part 2) Site Allocations Document did not identify an LSE on the Lee Valley SPA and Ramsar in relation to air quality. Although roads occur within 200m of Walthamstow Reservoir SSSI, which is a component of the Lee Valley SPA and Ramsar, they are sealed reservoirs that are designated for the bird interest which rely on freshwater habitats. Freshwater habitats are typically not susceptible to atmospheric pollution from road traffic (refer to Appendix 3 for further information). This SPA and Ramsar is therefore not considered further in this topic section.

6.2 Background

The Local Plan (Part 2) Site Allocations Document could potentially cause an adverse effect on the European sites identified above if traffic (and therefore emissions to air) were to increase within the borough or beyond the borough boundary for trips to access employment or other facilities such as cultural or retail. This could result in an increase in nitrogen deposition, which could have a direct or indirect effect on habitats sensitive to additional nitrogen. Direct effects arise when a pollutant is dispersed in the air and taken up by vegetation causing an adverse impact on plant health. Indirect effects occur when the pollutant settles onto the ground causing eutrophication or acidification of the soil. These effects can lead to changes in species composition due to encroachment of plants that favour higher nitrogen levels.

Natural England advises that European Sites falling within 200m of the edge of a road affected by a plan or project need to be considered further[27] [28](this does not mean that there is not the possibility of impacts due to increasing emissions from diffuse sources).

[27] Bignal, K., Ashmore, M. & Power, S. 2004. The ecological effects of diffuse air pollution from road transport. English Nature Research Report No. 580, Peterborough.

[28] Ricarda-Aea, 2016. The ecological effects of air pollution from road transport: an updated review. Natural England Commissioned Report no.199.

6.3 Assessment of Effects Alone and In-combination

In order to assess the potential effects in relation to air quality resulting from the Waltham Forest Local Plan Local Plan (Part 2) Site Allocations Document and Local Plan Part 1 (which sets the quantum and strategic locations of development), strategic traffic data was obtained from Transport for London (TfL) which predicted traffic increases within London's highway network. The data includes all committed schemes within London and is, therefore, considered to provide predicted data for traffic increases generated by the Local Plan in-combination with increases from neighbouring plans. The data does not enable an assessment of predicted effects of traffic increases from the Waltham Forest Local Plan (Parts 1 and 2) on their own.

The data required some specialist analysis by transport consultants Awcock Ward Partnership. The analysis of the data has shown that there are a number of roads within Waltham Forest which pass within 200m of Epping Forest SAC on which traffic is predicted to increase by over 1000 Annual Average Daily Traffic (AADT) over the plan period. Following an accepted methodology within the Design Manual for Roads and Bridges[29], these predicted traffic increases are considered 'significant'. The road links identified as 'affected roads' are :

- A104 Epping New Road;
- A110 Whitehall Rd/Kings Head Hill;
- A112 Sewardstone Rd/Chingford Mount/Hoe St;
- A12 East Bound & West Bound;
- A121 Honey Lane;
- A121 Loughton Town Centre back towards A104;
- A406 North Circular Rd East Bound & West Bound;
- A503 Forest Rd;
- Crossroads, High Beech and Avey Lane to Sewardstone Rd (A112); and
- Pynrest Green Rd to Claypit Hill.

A further study was therefore required to assess whether air quality impacts, and the resulting impacts on the qualifying habitats of Epping Forest SAC, could be caused by the predicted traffic

[29] https://www.standardsforhighways.co.uk/dmrb/

increases. Natural England guidance[30] states that this study should identify whether the change in pollutant concentrations due to 'in-combination' growth exceeds 1% of the Critical Load[31].

An air quality study has been undertaken by specialist air quality consultants Kairus Ltd and can be found in Appendix 4. Their assessment used the Air Pollution Information System (APIS)[32] to identify the Critical Loads for nutrient deposition and acidification relevant to the qualifying habitats of Epping Forest SAC. These Critical Loads are shown in Tables 8.1 and 8.2.

Table 8.1: Critical Loads for Nutrient Deposition	
Habitat	**Critical Load (kg N/ha/yr)**
Atlantic Acidophilous Beach Forest with Ilex	10-20
North Atlantic Wet Heaths with Erica Tetralix	10-20
European Dry Heaths	10-20

Table 8.2: Critical Loads for Acidification	
Habitat	**Critical Load (keq N/ha/yr)**
Atlantic Acidophilous Beach Forest with *Ilex*	CLMinN 0.142 CLMaxN 1.73
North Atlantic Wet Heaths with *Erica Tetralix*	CLMinN 0.714 CLMaxN 1.59
European Dry Heaths	CLMinN 0.714

[30] Natural England (2018). NEA001 Advising Competent Authorities on the assessment of road traffic emissions under the Habitat Regulations.

[31] Critical Loads are defined as: *" a quantitative estimate of exposure to one or more pollutants below which significant harmful effects on specified sensitive elements of the environment do not occur according to present knowledge*" (Source: https://www.icpmapping.org/Definitions_and_abbreviations via the APIS website http://www.apis.ac.uk/critical-loads-and-critical-levels-guide-data-provided-apis)

[32] www.apis.ac.uk

Table 8.2: Critical Loads for Acidification	
Habitat	**Critical Load (keq N/ha/yr)**
	CLMaxN 1.59

The critical levels for NOx were used as set out in the European Union (EU) Ambient Air Quality Directive33 and transposed into law by the Air Quality standards regulations 2010[34], as amended. These levels are shown in Table 8.3.

Table 8.3: Critical Levels for Ecological Receptors		
Pollutant	**Averaging Period**	**Concentration (µg/m3)**
Oxides of Nitrogen (NOx)	Annual Mean	30
Ammonia (NH3)	Annual Mean	3
	Annual Mean	1 (for lichens and bryophytes)

The air quality study found that the predicted NO_x levels adjacent to the Epping Forest SAC increased by less than 1% of the Critical Load during the Local Plan period and are therefore insignificant. The assessment found that predicted NH_3, nutrient nitrogen deposition and/or acid deposition exceeded the 1% Critical Load at all the receptor locations along the roads adjacent to the Epping Forest SAC (refer to the receptor locations plans within the Kairus Ltd report in Appendix 4).

Further assessment of the impacts on the Epping Forest SAC was undertaken by predicting NH_3 concentrations, nutrient nitrogen and acid deposition at 20m intervals across a number of 200m

[33] Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe

[34] Air Quality Regulations 2010 – Statutory Instrument 2010 No. 1001

transects within the SAC. The data showed that the 1% Critical Load was exceeded in future years within the SAC.

Natural England guidance states that the next step is to check that the qualifying habitats for which Epping Forest SAC is designated for (i.e. Atlantic acidophilous beech forests, Northern wet heaths or European dry heaths) are located within the parts of the SAC identified as predicted to exceed the 1% Critical Load.

The vegetation which comprises Atlantic acidophilous beech forests within Epping Forest SAC falls within the following three UK National Vegetation Classification (NVC) community types:

- W14 *Fagus sylvatica -Rubus fruticosus* woodland
- W15 *Fagus sylvatica – Deschampsia flexuosa* woodland
- W10 *Quercus robur – Pteridum aquilinum -Rubus fruticosus*

The vegetation which comprises Northern wet heaths within the Epping Forest SAC predominately consists of NVC community M16 *Erica tetralix - Sphagnum compactum* wet heath, whereas the European dry heaths community is H1 *Calluna vulgaris - Festuca ovina* heathland.

Although no NVC survey data is available for Epping Forest SAC, information on the general distribution of the qualifying habitats within the SAC was obtained by reviewing aerial photography[35] , information on the Natural England website[3637] and the Priority Habitat Inventory datasets available on the MAGIC website[38]. This review found that the predicted exceedances are located within either 'Lowland Mixed Deciduous Woodland', 'Wood-Pasture and Parkland', or 'Lowland Heathland' Priority Habitats. These Priority Habitats include the Annex I beech woodland and heathland habitats for which the SAC is designated.

It is noted that these Priority Habitat categories also include other woodland habitats types that are not qualifying SAC habitats. For instance, the previous surveys undertaken for Meridian

[35] Google Earth Pro Version 7.3.3.7786

[36] Natural England website: https://designatedsites.naturalengland.org.uk/sitegeneraldetail.aspx?SiteCode=UK0012720&SiteName=Epping%20Forest%20SAC&countyCode=&responsiblePerson=&unitId=&SeaArea=&IFCAArea=

[37] https://designatedsites.naturalengland.org.uk/ReportUnitCondition.aspx?SiteCode=S1001814&ReportTitle=Epping%20Forest%20SSSI

[38] www.magic.defra.gov.uk

Water[39] found that the habitat within 200m of the A406 was oak woodland and it was concluded this is not a qualifying feature of the SAC[40]. Nonetheless, Atlantic acidophilous beech forest habitat is the primary reason why this SAC was selected for designation and therefore, on a precautionary basis, it has been assumed that qualifying habitats occur in the majority of the predicted exceedance points.

Exceedance of the 1% Critical Loads for NH3 concentrations, nutrient nitrogen and acid deposition could have a direct or indirect effect on qualifying habitats within the SAC. Direct effects arise when a pollutant is dispersed in the air and taken up by vegetation causing an adverse impact on plant health. Indirect effects occur when the pollutant settles onto the ground causing eutrophication or acidification of the soil. These effects can lead to changes in species composition due to encroachment of plants that favour higher nitrogen levels. Without mitigation, the increase in air pollutants as a result of traffic generated by the Waltham Forest Local Plan (Parts 1 and 2) in-combination with neighbouring plans is predicted to have an adverse effect on the integrity of the qualifying features within the SAC.

Mitigation

The air quality study (Kairus Ltd, April 2021, reproduced in Appendix 4) recommends that, given the sensitivity of the habitats found within Epping Forest SAC to nutrient nitrogen, an Air Quality Mitigation Strategy is developed and implemented prior to approval of the Waltham Forest Local Plan Parts 1 and 2. They envisage that the mitigation strategy could include measures such as:

- Initiatives to support walking, cycling and the use of public transport;
- Initiatives to increase the use and uptake of electric vehicles such as installation of off road and on road, private and public EV charging points;
- Strategic Road Signage Strategy;
- HGV Route Management Strategies;
- Campaigns to raise awareness of air quality issues and the benefits of more sustainable travel;
- Possibilities for green planting to absorb pollutants;
- Consideration of clean air zones; and

[39] Cited in Aecom 2020 New Enfield Local Plan 2041: Integrated Impact Assessment https://new.enfield.gov.uk/services/planning/integrated-impact-assessment-scoping-report-2020-planning.pdf

[40] Although it is noted that Natural England's Supplementary Advice on Epping Forest states that the oak woodland community W10 forms part of the H9120 Atlantic acidophilious beech forest. The NVC data on the Meridian water project cannot be sourced and therefore it was not possible to verify which woodland community the recorded adjacent the A406.

- Roadside Pollution extraction systems.

A Waltham Forest Air Quality Mitigation Strategy is currently under development which will present mitigation in line with the above suggestions to avoid the predicted increase in air pollution identified in the air quality study. The scope of the Air Quality Mitigation Strategy has been discussed with Natural England and City of London Conservators of Epping Forest, on 27th January 2021. The mitigation measures contained within the strategy will include the policies in the Waltham Forest Local Plan Part 1 which limit car parking in new developments, facilitate an increase in electric car use and facilitate a modal shift to walking and cycling. It is also noted in the strategy that the number of vehicle registrations per annum within the borough is currently decreasing[41]. Figure 8.1 also shows how the number of licensed battery operated vehicles (electric vehicles) in Waltham Forest has been increasing steadily since 2017.

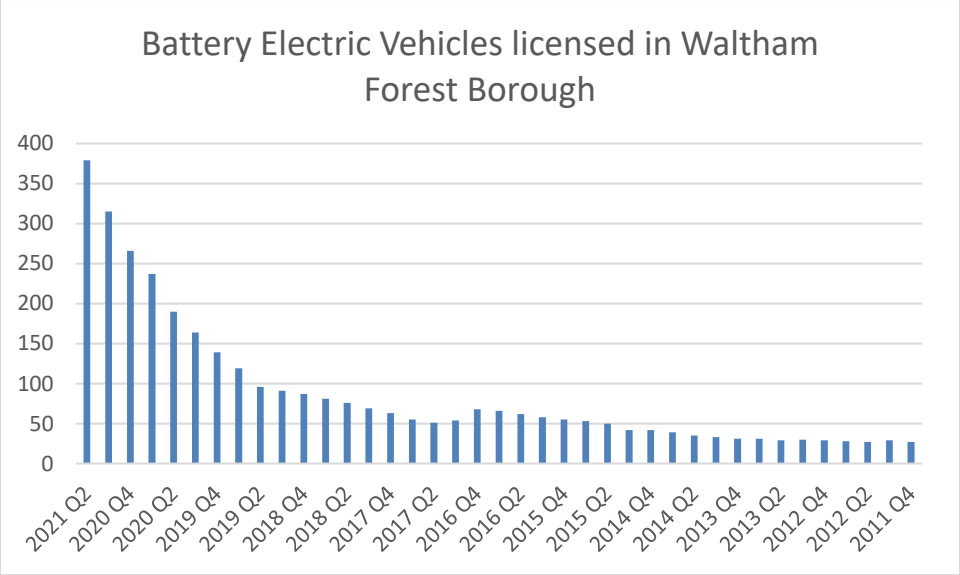

Figure 8.1: Battery Operated Vehicles (Electric Vehicles) licensed in Waltham Forest Borough at the end of the quarter

[41] Data provided by London Borough of Waltham Forest. 13/12/2019

The Waltham Forest Air Quality Mitigation Strategy will be based on modelling which will ascertain the predicted effectiveness in reducing predicted air pollution on the roads which are within 200m of Epping Forest SAC over the duration of the plan period.

It is important that monitoring is undertaken to understand how air pollution changes over the plan period and in order to take action should predicted outcomes differ in reality. Monitoring measures will therefore be set out within the Waltham Forest Air Quality Mitigation Strategy. Monitoring will help to provide more accurate data to compare with modelled predictions and ensure that strategies can be adjusted, if necessary, to ensure that the Epping Forest habitats and therefore the integrity of the SAC is not adversely affected by air pollution. Due to the uncertainties and speed of change brought about by the Covid 19 pandemic, the Waltham Forest Local Plan is likely to be reviewed as soon as it is adopted. Transport for London are also developing a new way of modelling multi-modal strategic transport in London and the surrounding areas called Model of Travel in London (MoTiON)[42]. MoTiON should provide a more up to date basis for modelling predicted traffic resulting from the Local Plan review.

6.4 Conclusions

The Waltham Forest Local Plan Air Quality Mitigation Strategy is currently under development. Once finalised, the Air Quality Mitigation Strategy will set out the appropriate mitigation to be able to conclude that there will be **no adverse effect on the Epping Forest SAC from air pollution as a result of the Waltham Forest LP1 policies.**

[42] Transport for London (undated) London's Strategic Transport Models available here: http://content.tfl.gov.uk/londons-strategic-transport-models.pdf

7 Appropriate Assessment: Urban Effects

7.1 Introduction

A variety of 'urban effects' can result in adverse impacts on European sites. Those considered in particular in this section are given below:

- Cat predation;
- Localised effects from construction;
- Fires; and
- Fly tipping / litter resulting in spread of diseases and invasive species.

Screening of the Local Plan (Part 2) Site Allocations Document has identified that the following sites could result in an LSE from urban effects on the Epping Forest SAC as they are located within 400m of the SAC boundary:

- South Waltham Forest: SA15, SA16 and SA19;
- Central Waltham Forest: SA39, SA40 and SA42; and
- North Waltham Forest: SA52, SA54, SA56, SA57, SA58 and SA62.

Screening of the Local Plan (Part 2) Site Allocations Document has also identified that the following site could result in an LSE on the Lee Valley SPA and Ramsar as it is located within 50m of this site:

- SA69 Blackhorse Lane SIL 3

The screened-in allocation sites are shown on Figure 7.1.

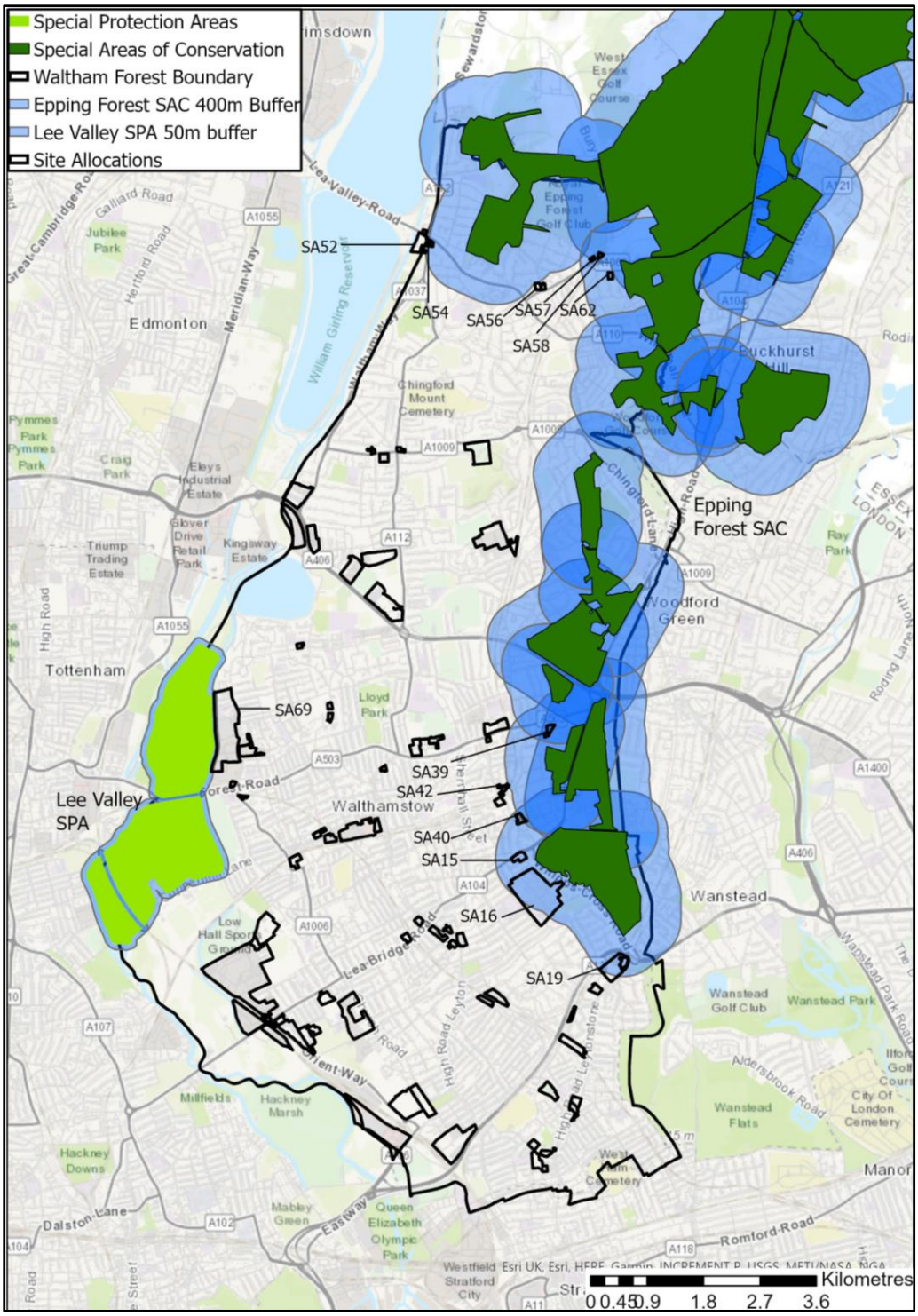

Figure 7.1: Urban Effects Assessment Buffer Zones and Screened-In Allocation Sites

7.2 Background

This sub-section gives an outline of the evidence regarding each urban effect outlined in Section 7.1 followed by a summary of the effects of relevance to each European Site in sub-section 7.3:

The localised effects of recreational pressures including the effect of dogs on the Lee Valley SPA/Ramsar and Epping Forest SAC are considered in Section 5: Recreational Pressures. However, it is noted that urban effects and localised recreational pressures are intrinsically linked. Site allocations within 400m of the Epping Forest SAC would result in more regular visits from new residents, as well as potential new bike jumps, den building sites and camps being created in the SAC. This could result in proliferation of access points into the SAC and further soil compaction and vegetation removal. A discussion of measures which mitigate for urban effects and localised recreational pressures have therefore been included within this section where appropriate.

7.2.1 Cat predation

Cat predation is considered to be a potential issue for the wintering birds within the Lee Valley SPA/Ramsar as birds are particularly vulnerable to predation. Studies have shown that on average cats roam up to 400m although they can occasionally roam further[43]. 400m from the proposed development is considered to be the zone where adverse effects from cat predation could occur.

7.2.2 Localised effects from construction

Possible localised effects from construction that are relevant to this assessment are as follows:

- Construction could create air pollution which could have adverse effects on the habitats within the European sites. Construction dust falls out within 200m of a site and therefore development within this 200m zone could result in damage to the features of a European Site; and
- Construction activities could result in disturbance to birds that occur in adjacent development sites due to construction noise and visual disturbance.

[43] Barratt, D.G. (1997). Home range size, habitat utilisation and movement patterns of suburban and far cats Felix catus. Ecography 20 271-280.

7.2.3 Fires

Fires can have significant effects, both on woodland and heathland, and on the birds or animals that live on these habitats. Effects can be temporary, but they can also be long-term or even permanent.

Studies have been undertaken on the cause of fires[44] [45], although much of this is based on research on the lowland heathland in the Dorset Heaths. The principle causes of 'wild' fires are: deliberate fire-setting; camp fires/barbeques; planned fires that have got out of control (e.g. planned moorland management fires).

There is some evidence that a significant proportion of deliberate fire setting is by school-aged children. The Kirby & Tantram research showed that where more than 15% of the surrounding area (taken to be a 500m buffer around the designated site) was developed the numbers of unplanned fires increased; below this threshold the incidence of fires was close to zero.

7.2.4 Fly-tipping / litter resulting in spread of invasive species and diseases

Fly-tipping and littering including garden waste are likely to be more prevalent when the urban area is within 400m of the SPA/SAC boundary (Liley, 2004; Liley, 2005; Underhill-Day, 2005). A study of Yateley Common to Castle Bottom SSSI (Liley, 2004) found that garden waste dumping was concentrated around the developed edges of the SSSI/SPA. Dumping of garden waste also increases the spread of invasive non-native species and diseases within a SAC/SPA i.e. rhododendron can be a host to the *Phytophthora* pathogen which is a threat to beech trees[46]. Release of unwanted pets and fish is also likely to be more prevalent from urban areas close to a SAC/SPA.

[44] J. C. Underhill-Day, (2005) 'A literature review of urban effects on lowland heaths and their wildlife', English Nature Research Reports, Number 623

[45] J.S. Kirby & D.A.S Tantram (1999) 'Monitoring heathland fires in Dorset: Phase 1' Report to Department of the Environment, Transport and the Regions: Wildlife and Countryside Directorate

[46]https://consult.cityoflondon.gov.uk/consult.ti/EF_Management_Plan_1/viewCompoundDoc?docid=6709076&sessionid=&voteid=&partId=6711220

7.3 Assessment of effects alone and in-combination

7.3.1 Epping Forest SAC

Effects of the Site Allocations Document

No adverse effects on the SAC are predicted from dust deposition during construction or an increase in cat population as a result of the Local Plan (Part 2) Site Allocations Document for the following reasons:

- Construction of developments within the borough would follow guidance set out in the Mayor of London's 'The Control of Dust and Emissions During Construction and Demolition Supplementary Planning Guidance.' This guidance ensures that appropriate dust control measures are implemented on construction sites. Adverse effects on the SAC as a result of dust deposition is therefore unlikely; and
- Cats are not predicted to have an effect on the stag beetle population which is one of the reasons for the SAC designation. The heavily urban context of the boundary between the SAC and the borough means that an existing domestic cat population is already likely to occur within Epping Forest. The potential increase in cat population resulting from the Local Plan (Part 2) Site Allocations Document is not expected to have an adverse effect on the integrity of the stag beetle population within the SAC.

The management of fly-tipping and litter and its associated risk of introduction of non-native species and disease through garden waste is identified as an issue for Epping Forest SAC by the City of London Corporation. Collection and disposal of fly-tipping waste and litter costs over £250,000 a year. Also, substantial fires have previously occurred within Epping Forest SAC[47]. Although the City of London Corporation employs staff to deal with litter/fly-tipping and an Emergency Plan is in place which covers fires, these issues are having a drain on limited resources.

Notwithstanding this, research has shown that fly-tipping, litter and fire risk are more likely to occur adjacent to a European Site, with adverse effects increasing nearer to the SAC. Movement barriers may be present between the proposed development and the SAC (i.e. busy roads), which may limit access to the SAC. All the Site Allocations within 400m of the SAC (as listed in Section 7.1 above) are assessed in further detail in the below table:

[47] https://www.bbc.co.uk/news/uk-england-london-23382771 website accessed 5 March 2020

Table 7.1: Assessment of Site Allocations within 400m of the Epping Forest SAC			
Site Allocation Number	**Approx. distance to SAC at its closest point**	**Number of proposed new homes**	**Unmitigated Potential Effects**
South Waltham Forest			
SA15 Territorial Army Centre,	100m	130 homes	Site separated from SAC by roads, however, pedestrian road crossing points occur on Whipps Cross Rd enabling pedestrian access to the SAC. Development could therefore result in an increased risk of littering and possible fire damage to the SAC. No risk of littering from garden waste due to separation between site and SAC. Overall, this site is predicted to result in **an adverse effect on the integrity of the SAC** due to urbanisation
SA16 Whipps Cross University Hospital	60m	1500 homes	Development would result in approximately 1500 new dwellings. Pedestrian access to the SAC would be via the pedestrian crossing across Whipps Cross Rd. Dwellings would be within accommodation blocks and gardens are therefore likely to be communal and maintained by a management company. The development is also separated by a main road and depositing garden waste within the SAC is therefore unlikely. 1500 dwellings proposed and therefore this development would result in a significant increase in population which could increase littering and fire risk within the SAC. This site is predicted to result in **an adverse effect on the integrity of the SAC** due to urbanisation.
SA19 Tesco Leystone	160m	650 homes	Site is separated from the SAC by roads, however, pedestrian road crossing points occur between the site and the SAC enabling pedestrian access. Development could therefore result in an increased risk of littering and possible fire damage to the SAC. There is no risk of littering from garden waste due to separation between the site and the SAC. Overall, this site is predicted to result in **an adverse effect on the integrity of the SAC** due to urbanisation.
Central Waltham Forest			
SA39 Hylands Rd Phase 1 and 2,	170m	120 homes	Pedestrian access between the site and the SAC via Hylands Rd and Forest Rd. This site is buffered from the SAC by an area of public open space

			which would reduce urbanisation. Development could however still result in an increased risk of littering and possible fire damage to the SAC. No risk of littering from garden waste due to separation between site and SAC. Overall, this site is predicted to result in **an adverse effect on the integrity of the SAC** due to urbanisation
SA40 Crown Lea,	260m	90 homes	Pedestrian access between the site and the SAC via Wood St and pedestrian crossing across the A104. Development could therefore result in an increased risk of littering and possible fire damage to the SAC. No risk of littering from garden waste due to separation between the site and the SAC. Overall, this site is predicted to result in **an adverse effect on the integrity of the SAC** due to urbanisation
SA42 Travis Perkins,	398m	50 new homes	Site is on the cusp of the 400m zone. The site is separated by the rail line and several roads and can only be accessed indirectly via road/walkway under wood street station. No risk of urbanisation therefore predicted from this site.
North Waltham Forest			
SA52 Motorpoint	390m	385 homes	Site is just under 400m from the SAC; however, it has good pedestrian access to the SAC via Kings Head Hill Rd and Holly Drive. The development could therefore result in an increased risk of littering and possible fire damage to the features of the SAC. There is considered to be no risk of littering from garden waste due to distance between site and SAC. Overall, this site is predicted to result in **an adverse effect on the integrity of the SAC** due to urbanisation
SA54 60-74 Sewardstone Rd	335m	40 homes	Site has good pedestrian access to the SAC via Kings Head Hill Rd and Holly Drive. The development could therefore result in an increased risk of littering and possible fire damage to the features of the SAC. There is considered to be no risk of littering from garden waste due to the distance between the site and the SAC. Overall, this site is predicted to result in **an adverse effect on the integrity of the SAC** due to urbanisation

SA56 Chingford Library and Assembly Hall	395m	40 homes	Site is just under 400m from the SAC; however, it has good pedestrian access to the SAC via Mornington Rd. The development could therefore result in an increased risk of littering and possible fire damage to the features of the SAC. There is considered to be no risk of littering from garden waste due to distance between the site and the SAC. Overall, this site is predicted to result in **an adverse effect on the integrity of the SAC** due to urbanisation
SA57 North City Autos, Chingford	235m	30 homes	Site has pedestrian access to the SAC via Ranger's Rd. The development could therefore result in an increased risk of littering and possible fire damage to the features of the SAC. There is considered to be no risk of littering from garden waste due to distance between site and SAC. Overall, this site is predicted to result in **an adverse effect on the integrity of the SAC** due to urbanisation.
SA58 Royal Epping Forest Golf Club	185m	45 homes	Site has pedestrian access to the SAC via Forest Avenue. The development could therefore result in an increased risk of littering and possible fire damage to the features of the SAC. There is considered to be no risk of littering from garden waste due to distance between site and SAC. Overall, this site is predicted to result in **an adverse effect on the integrity of the SAC** due to urbanisation
SA62 Pear Tree House	120m	33 homes	Site has good pedestrian access to the SAC via Gordon Rd and Forest Avenue. The development could therefore result in an increased risk of littering and possible fire damage to the features of the SAC. There is considered to be no risk of littering from garden waste due to distance between site and SAC. Overall, this site is predicted to result in **an adverse effect on the integrity of the SAC** due to urbanisation

Mitigation is included in the section below which also discusses whether there are additional risks relating to recreation pressure that may need to be considered over and above the measures outlined in Section 5.

Mitigation Recommendations

Strategic level mitigation

Adverse effects on the Epping Forest SAC have been identified as a result of site allocations which occur within 400m of the SAC: SA15, SA16, SA19, SA39, SA40, SA42, SA52, SA54, SA56, SA57, SA58 and SA62. In order to mitigate for these adverse urban effects, a 'SAMM+' contribution in line with Natural England's 'Toolbox Approach' would be required by each site to directly fund '*a significant project from the City of London's proposed complete solution to deal with potential acute development issues in close proximity to the SAC*'.

A costed whole-forest SAMM strategy has been produced by Conservators of London (refer to Section 5) with a more detailed SAMM+ strategy (LUC 2020)[48] included as an appendix. This SAMM+ strategy sets out costed measures for reducing urban effects (which includes localised recreational pressures) in the busiest areas in the forest, which includes Chingford Plain and Leyton Flats. These two areas are the closest part of the forest to all except one of the Site Allocations within 400m of the forest. SA39 Hylands Rd occurs adjacent to Gilbert's Slade & Rising Sun Wood which is a less disturbed part of the forest and is buffered from the site allocation by existing public open space[49].

Mitigation measures detailed within the SAMM+ strategy to reduce urban effects/recreational pressures in these two areas are outlined in Table 7.2 below. Each site allocation would be required to contribute towards this SAMM+ strategy to ensure funding for these measures is provided in-perpetuity.

[48] LUC (September 2020). Epping Forest SAC Mitigation Report.

[49] Wanstead Wildlife website: https://www.wansteadwildlife.org.uk/index.php/en/gilberts-slade70

Table 7.2. SAMM+ Mitigation Measures for Epping Forest SAC to reduce Urban Effects (LUC, 2020)	
Site Allocations	**Mitigation Measures**
Chingford Plain	
SA52, SA54, SA56, SA57, SA58, and SA62	Establish Bury Lane car park as a primary car park for the site as it is outside of the SAC, it has considerable capacity and is currently under-used. Improve signage and surfacing to this car park. Provide bins suitable for the disposal of dog waste. Wayfinding and signage provided to encourage circular routes around Chingford Plain but outside the SAC, with routes demarcated by unsurfaced mown paths only. Provide a gravel path from the Bury Road to Connaught Water, to provide a clear link suitable for less mobile users and hence provide a suitable alternative to using the smaller and limited capacity car park at Connaught Water. Repair of damage from desire lines along current desire line. Measures to include decompaction of existing path and encouragement of the growth of longer acid grass. Sealed surface path joining Connaught Water to the visitor centre and QE Hunting Lodge to replace the wide and muddy desire line. Informal recreation area promoted behind QE lodge and Butler's Retreat for kite flying, dog walking, as well as woodland play area to ensure Butlers Lodge and QE Hunting Lodge continue to act as a primary hub for visitors to Epping Forest. Events promoted in the areas of Chingford Plain adjacent to Bury Lane Car Park, and only in areas outside of the SAC land Improved entrance, cycle hire and café hub at Bury Road/Rangers Road junction. These should include toilet facilities to allow visitors to use the car park as a base for exploring the area to the west. Improved signage to and from Chingford Town Centre for pedestrian and public transport connections, Modify provision of car parking at and around Barn Hoppitt car park. Prevent the use of SAC area as an overflow car park. Circular route signposted to Warren Pond.

Table 7.2. SAMM+ Mitigation Measures for Epping Forest SAC to reduce Urban Effects (LUC, 2020)	
Site Allocations	**Mitigation Measures**
	Provide a circular route around Chingford Golf Course signposted from Bury Lane car park to relieve recreational pressure from the eastern section of Chingford Plain. Ensure that paths are well signed with information to help avoid conflicts between walkers and golfers. Landscape improvements, Lay hard surface outside the Butler's Retreat and Visitor Centre to improve the seating area and provide a coordinated access point to Connaught Water and to the Bury Road car park. Provision of a Ranger service liaison with visitors, to run the dog liaison, golf course and cyclist liaison groups and oversee specialist habitat maintenance and restoration.
Leyton Flat	
SA15, SA16, SA19 and SA40	Fire defence lines (routes clear of woody vegetation) to provide access for fire trucks and to provide a defendable area to help prevent a spread of fire from Leyton Flats to adjacent housing. These lines also provide a preferred pedestrian route around the SAC acid grassland and will be waymarked accordingly. Measures to reduce erosion of acid grassland, a key feature of the SSSI and habitat which is characteristic of Leyton Flats. The area is also included as part of the dry heath areas of Epping Forest, a qualifying habitat of the SAC. Amenity grassland area maintained close to the car park and Hollow Pond only. Low key barriers may be necessary in the short term to confine recreational use (especially the exercising of dogs) to this area. Signage installed to educate visitors about why the acid grassland needs to be protected to attempt to deter visitors from crossing the sensitive area. Improvements to already established entry and exit points to Leyton Flats. This should include improved litter / dog waste disposal, parking and vehicle management, consistent interpretation, wayfinding and signage, consideration of sightlines. Significant entrance improvements associated with the Whipps Cross 'Mini- Holland' scheme and access to Cow Pond. Subject to further scoping and impact assessment, there may be an option to provide a new interpretation facility, boat hire facility, refreshments and toilets close to the main car park (outside SAC).

Table 7.2. SAMM+ Mitigation Measures for Epping Forest SAC to reduce Urban Effects (LUC, 2020)	
Site Allocations	**Mitigation Measures**
	Circular, surfaced trail, with boardwalks where necessary (with appropriate measures to protect ancient trees) promoted around Hollow Lake to provide pedestrian route for visitors and deter activity from more sensitive areas such as the acid grassland habitat. Edges of the existing Hollow Pond and Eagle Pond naturalised and re-graded in key areas to improve wetland habitats. Existing wet woodland habitat managed to diversify woodland types and improve habitats for wildlife associated with standing water. Glade creation, clearance and wood-pasture restoration to improve growing conditions for ancient trees. Glades created alongside footpaths for improved edge habitat and to make the path feel safer and to deter antisocial activity. Retain older trees for their landscape and ecological value. Access enhanced and promoted to non-SAC land to the south of Leyton Flats adjacent to the hospital, in order to decrease visitor pressure on the SAC. Enhancements could include creating more open areas, benches, dog bins, Provision of a Ranger service for liaison with visitors, to help run the dog liaison and Whipps Cross hospital site liaison groups and oversee specialist habitat and restoration.

Each site allocation would be required to contribute towards this SAMM+ strategy to ensure funding for these measures is provided in-perpetuity. This strategy provides a suitable mechanism to protect the SAC from urban effects when used in-conjunction with the project-level mitigation outlined below.

Policy 95: Waste Management within the Submission Version of the Local Plan (Part 1) is a protection policy that would result in a reduction of waste production and subsequent disposal. It also ensures that all new development includes sufficient waste and recycling facilities. In addition, the Waste and Recycling Guidance for Developers (Waltham Forest 2020)[50] include the requirements for new developments to dispose of redundant bulk household goods, such as refrigerators, furniture and cookers. This policy and development guidance document provides a mechanism to reduce waste and reduce fly-tipping within Epping Forest SAC.

Project level mitigation

Policy 83: The Epping Forest and Epping Forest Special Area of Conservation within the LP1 is a protection policy (refer to Box 2.5). Bullet Point C of this policy requires planning applications for developments and allocations within the agreed buffer distance of the Epping Forest SAC (400m) to demonstrate through project level HRA that the development will not generate adverse urban effects on the integrity of the SAC.

Project-level HRA should provide project specific details on how adverse urban effects on the SAC would be mitigated. The following wording has been put forward for inclusion in the 'Development Guidelines' for site allocations SA15, SA16, SA19, SA39, SA40, SA42, SA52, SA54, SA56, SA57, SA58 and SA62 as these are all located within 400m of the Epping Forest SAC:

- A development design that focusses on ensuring the proposed buildings, landscaping and infrastructure layout maximise on-site green spaces and minimise access to Epping Forest SAC;
- As part of a project level HRA, details of proposed measures that would be undertaken to mitigate for urban effects to ensure no adverse effect on the Epping Forest SAC; and
- Waste management measures for the site should be in accordance with the Waste and Recycling Guidance for Developers (Waltham Forest 2020).

[50] https://www.walthamforest.gov.uk/sites/default/files/Waste%20_%20Recycling%20-%20Guidance%20for%20Developers.pdf website accessed 18 October 2021

In addition the following text has been put forward for inclusion in the introductory chapters of the Site Allocation Document (LP2):

> *"A Habitats Regulations Assessment (HRA) is being undertaken of the Local Plans Part 1 and 2 in accordance with the Conservation of Habitats and Species Regulations 2017 (as amended) and in consultation with Natural England and the City of London, Conservators of Epping Forest. As part of Emerging Strategic Mitigation for Epping Forest, Natural England has issued advice that all residential development within 3km of the SAC and all development with 100 or more dwellings within 6.2km of the SAC should make a financial contribution to strategic measures as set out in the costed Strategic Access Management Measures (SAMM) provided by the Conservators of Epping Forest. The HRA has identified that developments within 400m of the Epping Forest Special SAC boundary pose a particular risk to the integrity of the SAC and will therefore need to do more in relation to mitigating potential adverse urban effects arising from development. Potential urban effects need to be dealt with on a site by site basis and mitigation put forward to address what is needed to mitigate for development on that site. Policy wording is included in LP1 and LP2 to ensure that urban effects are addressed at the detailed design stage. The HRA assessment has identified the types of mitigation which are suitable for incorporation into detailed design at the project stage in order to ensure that measures are secured to eliminate adverse effects on the SAC. As well as mitigating potential effects on site, there are projects in the SAMM list which allocations could also specifically contribute to."*

Policy wording therefore ensures that urban effects are addressed at the detailed design stage and that measures are possible that can be secured at project level to eliminate adverse effects on the Epping Forest SAC.

Assessment of In Combination Effects

Epping Forest SAC is also located partly within the London Borough of Redbridge and Epping Forest District. The Redbridge Local Plan (adopted March 2018) aims to provide 17,237 new homes across the borough. The HRA of this Local Plan states that an estimated 53 units would be located within the Epping Forest SAC zone of influence for urban effects (defined as 400m within the Redbridge HRA). The EFDC Local Plan 2011-2033 (Submission Version dated December 2017) makes provision for a minimum of 11,400 new homes. The HRA of this Local Plan found that 116 new homes would be located within 400m of the SAC.

Both the Local Plans for Redbridge and Epping Forest include policy specifying that development adjacent the SAC would need a project level HRA to be undertaken prior to granting permission in order to demonstrate that no adverse effects will occur to this SAC. The EFDC Local Plan was found to be not sound by the Inspector during the Examination in 2019 and requires major modifications before it can be accepted. Urban effects on the SAC was identified as one of the

issues by the Inspector. EFDC has updated their HRA and prepared a Green Infrastructure Strategy to address the issues raised by the Inspector. The EFDC Green Infrastructure Strategy is predicted to decrease urban effects and be sufficient for EFDC to be satisfied that appropriate mitigation can be achieved. Therefore, no in combination urban effects from the EFDC Local Plan are predicted.

The London Borough of Enfield is approximately 350m to the west of Epping Forest SAC. The Enfield Local Plan is being prepared which is likely to result in new homes across the borough; however, King George Reservoir lies on the eastern edge of this borough and therefore it is not possible for development to be located within 400m of the SAC and no in combination urban effects from this Local Plan are therefore predicted.

7.3.2 Lee Valley SPA and Ramsar

Effects of the Local Plan (Part 2) Site Allocations Document

The following potential urban effects are unlikely to impact the birds for which the SPA and Ramsar is designated:

- Cats are not predicted to have an effect on the SPA and Ramsar feature as the likelihood of a cat regularly predating gadwall, shoveler or bittern is very remote. For example, if the housing development is a block of flats, it may be that residents are less likely to own cats;
- Fire risk within the SPA/Ramsar is considered to be low as the majority of the habitats within the site are aquatic;
- Invasive species release and spread of disease into the SPA/Ramsar through fly-tipping of garden waste and release of fish is considered to be unlikely as the reservoir is surrounded by security fencing and none of the sites within the Local Plan (Part 2) Site Allocations Document would result in gardens backing on to the site. Also, Policy 95: Waste Management would result in a reduction of waste production and subsequent disposal;
- Visual disturbance of birds is unlikely as the reservoirs are already screened from surrounding land as they have high retaining banks and marginal vegetation; and
- Construction of developments within the borough would follow guidance set out in the Mayor of London's 'The Control of Dust and Emissions During Construction and Demolition Supplementary Planning Guidance. This guidance ensures that appropriate dust control measures are implemented on construction sites. Adverse effects on the SPA/Ramsar as a result of dust deposition is therefore unlikely.

The LP2 could result in an urban effect from noise generated by the construction of developments near to the SPA/Ramsar. A 3-year study of wetland birds at the Stour and Orwell SPA[51] found that the birds reacted most to relatively infrequent events, such as gun shots and aircraft noise. Birds seemed to habituate to frequent 'benign' events such as vehicles, sailing and horses, but there was evidence that apparent habituation to more disruptive events related to reduced bird numbers as birds appeared to avoid the most frequently disturbed areas.

SA69 Blackhorse Lane SIL 3 would result in commercial development approximately 35m from the Lee Valley SPA and Ramsar which could increase noise levels within this European Site during construction. The birds within the SPA and Ramsar are likely to have become habituated to a degree of background noises as the area is surrounded by urban development with busy roads. Nonetheless, increased noise levels within the site during the sensitive winter period, particularly during construction, could disturb the designated bird species within the SPA/Ramsar. Therefore, a risk of an adverse effect on the integrity of the Lee Valley SPA/Ramsar cannot be ruled out at this stage due to potential urban effects from SA69. All remaining site allocations are over 50m from the SPA/Ramsar are not predicted to have an urban effect on this European Site due to distance.

Mitigation

Policy 84F: The Lee Valley Regional Park within LP1 states that 'Planning applications for development at Blackhorse Lane will need to be accompanied by a project level HRA to ensure the development will not generate adverse urban effects on the integrity of the Lee Valley SPA and Ramsar'. This would provide an appropriate mechanism to protect the Lee Valley SPA/Ramsar from adverse urban effects potentially generated by SA69 as appropriate constructions measures would need to be included as part of the project-level HRA to demonstrate how no adverse effect would be achieved at the detailed design stage.

Assessment of In Combination Effects

The Walthamstow Reservoirs SSSI, which is the component site of the Lee Valley SPA/Ramsar located within Waltham Forest, is located immediately to the east of the London Borough of Haringey and immediately to the north of the London Borough of Hackney. Both boroughs have produced HRAs of their Local Plans (refer to Appendix 2 for further Local Plan information) which conclude that there will be no adverse effects on the Lee Valley SPA/Ramsar either alone or in combination with other plans and projects.

[51] Ravenscroft, N. (2005) Pilot study into disturbance of waders and wildfowl on the Stour-Orwell SPA: analysis of 2004/05 data. Report to Suffolk Coast & Heaths Unit.

7.4 Conclusions

7.4.1 Epping Forest SAC

Epping Forest SAC is currently subject to urban effects primarily from fly-tipping and litter but also from fires. The Local Plan (Part 2) Site Allocations Document would result in new homes located within 400m of the SAC.

Provided that the mitigation recommendations detailed in Section 7.3.1 of this report are implemented within the Local Plan (Part 2) Site Allocations Document then it can be concluded that the **Local Plan (Part 2) Site Allocations Document would not result in adverse urban effects on the integrity of Epping Forest SAC either alone or in-combination.**

7.4.2 Lee Valley SPA and Ramsar

The assessment of urban effects of the Local Plan (Part 2) Site Allocations Document has found that there would be no adverse effects on the Lee Valley SPA and Ramsar as a result of cat predation, localised effects of construction, fires and fly-tipping/litter. It can therefore be concluded that there are **no adverse residual effects on the integrity of the Lee Valley SPA /Ramsar as a result of urban effects due to the Local Plan (Part 2) Site Allocations Document either alone or in combination.**

8 Summary, Mitigation and Conclusions

8.1 Screening Results

HRA screening of the Local Plan (Part 2) Site Allocations Document (October 2021) policies identified a number of LSEs in relation to the following:

- Potential LSE on the Epping Forest SAC and the Lee Valley SPA/Ramsar due to increased recreational pressures;
- Potential LSE on the Epping Forest SAC through an increase in traffic and therefore air pollution; and
- Potential LSE on the Epping Forest SAC and Lee Valley SPA/Ramsar from 'urban effects'.

8.2 Appropriate Assessment

The AA stage of HRA has been undertaken to evaluate the potential for the 'screened in' sites within the Local Plan (Part 2) Site Allocations Document to result in adverse effects on the European sites as listed above.

8.2.1 Epping Forest SAC

With the mitigation in place within the LP1 and the supporting SANG Strategy (incorporated into a Mitigating the Impact of Development on SAC SPD) it will be possible to conclude that the Waltham Forest Local Plan (Part 2) Site Allocations Document will not result in adverse effects on the integrity of Epping Forest SAC in relation to recreational pressures when the Plan is assessed on its own or in combination with growth in neighbouring areas.

With the mitigation in place within the Air Quality Mitigation Strategy, it will be possible to conclude that the Waltham Forest Local Plan (Part 2) Site Allocations Document will not result in adverse effects on the integrity of Epping Forest SAC in relation to air quality when the Plan is assessed on its own or in combination with growth in neighbouring areas.

It was concluded that the following site allocations could have an adverse effect on the Epping Forest SAC as they would result in development occurring within 400m of the SAC (urban effects):

- South Waltham Forest: SA15, SA16 and SA19;
- Central Waltham Forest: SA39, SA40 and SA42; and
- North Waltham Forest: SA52, SA54, SA56, SA57, SA58 and SA62.

8.2.2 Lee Valley SPA and Ramsar

The AA is able to conclude that the Local Plan (Part 2) Site Allocations Document will not result in adverse effects on the Lee Valley SPA and the Lee Valley Ramsar site in relation to recreational pressures and urban effects, both alone and in combination with growth in neighbouring areas.

8.3 Mitigation Recommendations

8.3.1 Epping Forest SAC

Recreational Pressures

The requirement to implement a mitigation framework to offset the recreational impacts of the Local Plan (Part 2) Site Allocations Document is included within 'Policy 83: The Epping Forest and Epping Forest Special Area of Conservation' of the Proposed Submission Version Local Plan Part 1. No further mitigation recommendations are therefore put forward.

Urban Effects

The following wording has been put forward for inclusion in the 'Development Guidelines' for site allocations SA15, SA16, SA19, SA39, SA40, SA42, SA52, SA54, SA56, SA57, SA58 and SA62 as these are all located within 400m of the Epping Forest SAC:

- A development design that focusses on ensuring the proposed buildings, landscaping and infrastructure layout maximise on-site green spaces and minimise access to Epping Forest SAC;
- As part of a project level HRA, details of proposed measures that would be undertaken to mitigate for urban effects to ensure no adverse effect on the Epping Forest SAC; and
- Waste management measures for the site should be in accordance with the Waste and Recycling Guidance for Developers (Waltham Forest 2020).

In addition the following text has been put forward for inclusion in the introductory chapters of the Site Allocation Document (LP2):

> *"A Habitats Regulations Assessment (HRA) is being undertaken of the Local Plans Part 1 and 2 in accordance with the Conservation of Habitats and Species Regulations 2017 (as amended) and in consultation with Natural England and the City of London, Conservators of Epping Forest. As part of Emerging Strategic Mitigation for Epping Forest, Natural England has issued advice that all residential development within 3km of the SAC and all development with 100 or more dwellings within 6.2km of the SAC should make a financial contribution to strategic measures as set out in the costed Strategic Access Management Measures (SAMM) provided by the Conservators of Epping Forest. The HRA has identified that*

developments within 400m of the Epping Forest Special SAC boundary pose a particular risk to the integrity of the SAC and will therefore need to do more in relation to mitigating potential adverse urban effects arising from development. Potential urban effects need to be dealt with on a site by site basis and mitigation put forward to address what is needed to mitigate for development on that site. Policy wording is included in LP1 and LP2 to ensure that urban effects are addressed at the detailed design stage. The HRA assessment has identified the types of mitigation which are suitable for incorporation into detailed design at the project stage in order to ensure that measures are secured to eliminate adverse effects on the SAC. As well as mitigating potential effects on site, there are projects in the SAMM list which allocations could also specifically contribute to."

8.4 Overall Conclusions of the HRA

With the suggested mitigation in place within the Regulation 19 Local Plan (Part 2) Site Allocations Document, the supporting SANG Strategy (incorporated into a Mitigating the Impact of Development on SAC SPD) and Air Quality Mitigation Strategy, it will be possible to conclude that **the Waltham Forest Local Plan (Part 2) Site Allocations Document will not result in adverse effects on the integrity of Epping Forest SAC in relation to recreational pressures, air quality and urban effects when the Plan is assessed on its own or in combination with growth in neighbouring areas.**

The AA was able to conclude that **the Local Plan (Part 2) Site Allocations Document will not result in adverse effects on the Lee Valley SPA and the Lee Valley Ramsar site, both alone and in combination with growth in neighbouring areas.**

9 Next Steps

This HRA Report is being consulted on with Natural England during consultation on the Regulation 19 Local Plan (Part 2) Site Allocations Document.

Following consultation on the Regulation 19 Local Plan (Part 2) Site Allocations Document, the plan will be amended in response to consultation, prior to submission.

Table 9.1: Local Plan Site Allocations Document	
Activity	**Timeframe**
Consultation on Regulation 19 Local Plan (Part 2) Site Allocations Document	8 November 2021 to 14 January 2022
Examination in Public	Q2 2022
Local Plan (Part 2) Site Allocations Document is adopted subject to receipt of the Inspector's Report	Q4 2022

Appendix 1 – Information about European Sites

This appendix presents information about the European sites considered in the Waltham Forest Local Plan Part 1 HRA.

The following tables A1.1-A1.3 present a summary of the site designations, qualifying features and site sensitivities. This information has been obtained from:

- Joint Nature Conservation Committee (JNCC) website www.jncc.gov.uk;
- Multi-Agency Geographical Information Centre (MAGIC) website www.magic.gov.uk; and
- Natural England site improvement publications.

Table A1.1: Epping Forest SAC	
Name	Epping Forest SAC UK0012720
Location with regards to plan area	The majority of the site occurs to the north of the plan area with the southern part of the site extending into the north and east of the plan area: approximately 3.25 km^2 of the site is within the plan area itself.
Reason(s) for designation:	
ANNEX I Primary • 9120 Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrub layer (*Quercion robori-petraeae* or *Ilicic-Fagenion*) Non Primary • 4010 Northern Atlantic wet heaths with *Erica tetralix* • 4030 European dry heaths ANNEX II species – Primary • 1083 Stag beetle *Lucanus cervus*	
Component SSSI sites	• Epping Forest SSSI
Conservation objectives	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats and habitats of qualifying species; • The structure and function (including typical species) of qualifying natural habitats; • The structure and function of the habitats of qualifying species; • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely; • The populations of qualifying species, and, • The distribution of qualifying species within the site.[52]

[52] Natural England 27 November 2018 – version 3.
http://publications.naturalengland.org.uk/publication/5908284745711616

Table A1.1: Epping Forest SAC
Vulnerability and current conditions
Deteriorating air quality and under-grazing are the two key pressures that currently affect the site. While recreational pressure is a considerable impact in some areas, these are localised; however, funding of management on the SAC is governed largely by donation and contributions from the Corporation of London and it is likely that the ability to adequately manage recreation on the SAC will come under increasing pressure as the population of northeast London, Epping Forest and east Hertfordshire increases. Within the London Borough of Waltham Forest, only one SSSI management unit that underpin the SAC is in favourable condition – some are considered to be recovering from unfavourable status, but others are showing no improvement or are declining. In all cases, poor air quality is cited in the most recent condition assessment process (2010) as a primary factor for this condition. There are localised concerns over recreational pressure, but the condition assessment reports state that the site would be able to withstand this in a more robust manner were it not for the stress imposed by atmospheric pollutants. Under-grazing is also reported as a factor affecting condition in the majority of the management units.
Key factors affecting site integrity and objectives to ensure favourable condition status of the site (relating to conservation objectives)
• Air pollution - ensure no further increase in atmospheric nitrogen deposition, and measures are implemented to control, reduce and ameliorate nitrogen impacts; • Undergrazing - Maintain appropriate grazing levels; • Recreational pressure - manage recreational activity within the site; • Changes in species distribution - Maintain extent and distribution of beech trees by managing beech tree health and beech sapling recruitment; • Hydrological changes - maintain hydrological conditions within the site; • Water pollution - ensure water pollutants do not enter the site from surface water run-off from adjacent roads; • Invasive species - ensure invasive species do not spread i.e. heather beetle and grey squirrel; and • Disease - ensure disease does not spread within the site i.e. *Phytopthora* [53]

[53] Adapted from Site improvement plan – Epping Forest SAC (Natural England, 2016). http://publications.naturalengland.org.uk/publication/6663446854631424

Table A1.2: Lee Valley SPA	
Name	Lee Valley SPA UK9012111
Location with regards to plan area	The southern part of the Lee Valley SPA (Walthamstow Reservoirs; approximately 1.8km^2) occurs entirely within the plan area with the remaining parts of the SPA occurring to the north of the plan area along a series of wetland and reservoirs within Lee Valley.
Reason(s) for designation:	

SPA

This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:

Over-winter:

- Bittern *Botaurus stellaris* 6 individuals representing at least 6.0% of the wintering population in Great Britain (5 year peak mean, 1992/3-1995/6)

This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species*:*

Over-winter;

- Gadwall *Anas strepera,* 515 individuals representing at least 1.7% of the wintering Northwestern Europe population (5 year peak mean 1991/2 - 1995/6)

- Northern Shoveler *Anas clypeata,* 748 individuals representing at least 1.9% of the wintering Northwestern/Central Europe population (5 year peak mean 1991/2 - 1995/6)

Ramsar

Criterion 2: A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities. The site supports the nationally scarce plant species whorled water-milfoil *Myriophyllum verticillatum* and the rare or vulnerable invertebrate *Micronecta minutissima* (a water-boatman).

Criterion 6: A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.

Species with peak counts in spring/autumn:

- Shoveler *Anas clypeata,* 287 individuals, representing an average of 1.9% of the GB population (5 year peak mean 1998/9-2002/3)

Species with peak counts in winter:

<table>
<tr><th colspan="2">Table A1.2: Lee Valley SPA</th></tr>
<tr><td colspan="2">• Gadwall Anas strepera, 445 individuals, representing an average of 2.6% of the GB population (5 year peak mean 1998/9- 2002/3)</td></tr>
<tr><td>Component SSSI sites</td><td>• Walthamstow Reservoirs SSSI
• Amwell Quarry SSSI
• Rye Meads SSSI
• Turnford and Cheshunt Pits SSSI</td></tr>
<tr><td>Conservation objectives for the SPA</td><td>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:
• The extent and distribution of the habitats of the qualifying features;
• The structure and function of the habitats of the qualifying features;
• The supporting processes on which the habitats of the qualifying features rely;
• The population of each of the qualifying features, and
• The distribution of the qualifying features within the site.[54]</td></tr>
<tr><td colspan="2">Vulnerability and current condition
The Information Sheet on Ramsar Wetlands[55], states that ‘the whole site supports high levels of visitor pressure; principally for purposes of angling, walking, cycling and birdwatching; with boating on the adjacent canal. These activities are mostly well regulated and at current levels are not considered to threaten the interest’.
During the most recent condition assessment of the SSSI units that underpin the SPA/Ramsar site (2014), the Walthamstow reservoirs were listed as recovering from unfavourable condition. The assessment noted that ‘Wintering cormorant, tufted duck and shoveler counts, and breeding pochard and tufted duck numbers, were all assessed as favourable against the baseline data. Breeding heron numbers continue to fail the minimum threshold, but this is not considered to be a result of detrimental site management. The underlying causes are being investigated.’
There is also a potential problem from over-extraction of surface water for public supply, particularly during periods of drought.</td></tr>
</table>

[54]Natural England 21 February 2019 - version 3.
http://publications.naturalengland.org.uk/publication/5670650798669824

[55] http://jncc.defra.gov.uk/pdf/RIS/UK11034.pdf

Table A1.2: Lee Valley SPA
Key factors affecting site integrity and objectives to ensure favourable condition status of the site (relating to conservation objectives)
• Water pollution - ensure water pollutants do not enter the site and nutrient enrichment is limited; • Hydrological changes - maintain hydrological conditions within the site with consistent freshwater flows and volumes; • Recreational pressure - manage recreational activities in sensitive locations; • Inappropriate scrub control - maintain appropriate scrub management; • Fisheries - maintain appropriate fish species and population levels to ensure suitable food and water quality is maintained for designated features; • Invasive species - ensure invasive species do not spread, particularly *Azolla* and invasive aquatic blanket weeds; • Inappropriate cutting/mowing - maintain appropriate cutting/mowing regime for reedbed; and • Air pollution - ensure no further increase in atmospheric nitrogen deposition.[56]

[56] Adapted from Site Improvement Plan – Lee Valley SPA (Natural England, 2014) http://publications.naturalengland.org.uk/publication/5864999960444928

Appendix 2 - Details of Neighbouring Plans for In Combination Effects Assessments

This appendix presents information about the development plans of neighbouring local authorities to the London Borough of Waltham Forest which have been considered in the in combination effects assessment of the Waltham Forest Local Plan Site Allocations Document.

The following Tables A2.1 presents a summary of the growth planned in neighbouring areas and any relevant policies within their development plans. References for the sources of information are provided in footnotes.

Table A2.1 Details of Neighbouring Plans for In Combination Effects Assessments	
Local Authority	**Proposed Growth**
London Borough of Enfield	A new Local Plan is being prepared and reviewed in response to consultation comments received between December 2018 and February 2019. It is predicted that Enfield's population could exceed 400,000 by 2032. The extant Core Strategy[57] plans for growth concentrated in town centres and on previously developed land in the south and east of the Borough. Up to 2026 the plan aims to deliver approximately 11,000 new homes and the number of jobs will increase by a minimum of 6,000. Large scale growth and regeneration will be focused in four broad locations - Central Leeside and North East Enfield in the Upper Lee Valley, the area around the North Circular Road at New Southgate and the Borough's major town centre - Enfield Town. The strategic objectives for Enfield are to strengthen retail, public services and employment, protecting biodiversity, reducing the borough's carbon footprint, enhancing quality of life and living environments and reducing the need to travel, all of which are likely to result in sustainability positive effects.
Haringey	Strategic Policies were adopted by the council in 2013, to replace the Unitary Development Plan (UDP), with subsequent alterations adopted on the 24 July 2017[58]. The plan aims to deliver a minimum 19,800 net new homes over the plan period to 2026. The Council's overall strategy for managing future growth in Haringey is to promote the provision of homes, jobs and other facilities in the areas with significant redevelopment opportunities at, or near, transportation hubs, and support appropriate development at other accessible locations, with more limited change elsewhere. The Tottenham Hale Area of Growth is located to the east of the borough, close to the Lee Valley Regional Park and the boundary with Waltham Forest.

[57] The Enfield Plan Core Strategy 2010-2025 Adopted November 2010

[58] Haringey's Local Plan 2013 – 2026 (formerly the Core Strategy) March 2013 consolidated with alterations since 2017

Table A2.1 Details of Neighbouring Plans for In Combination Effects Assessments	
Local Authority	**Proposed Growth**
London Borough of Hackney	On 22 July 2020, the Hackney Local Plan 2033 was adopted. The Local Plan includes an objective to deliver up to 26,250 additional homes and 23,000 new jobs. Mixed used development with residential, employment, retail, leisure and community facilities will be focused in the designated town centres of Dalston and Hackney Central, and in Shoreditch (none of which are close to the boundary with Waltham Forest). New office development will be directed to the most sustainable locations in the Borough, including within the City Fringe Opportunity Area and the borough's Town Centres to support Hackney's economy. Mixed used, housing led development will be encouraged along the borough's key corridors (including Lea Valley Edge which borders Waltham Forest). This development is intended to deliver improvements to the public realm, new community facilities and other measures that promote healthy streets that easily link different neighbourhoods, open spaces public transport hubs, and civic areas by walking and cycling.
London Borough of Newham	The Newham Local Plan was adopted in December 2018 to replace the previous Core Strategy and Detailed Sites and policies Development Plan Document. The new plan covers a 15year period to 2033[59]. The Local Plan aims to deliver a minimum of 43,00 new homes by 2033, as well as up to 60,000 new jobs. Development of high density, mixed use and sustainable in terms of location and design are encouraged throughout Newham, but particularly in the following strategic locations: • Stratford and West Ham • Royal Docks • Canning Town and Custom House • Beckton • Urban Newham

[59] Newham Local Plan, 2018-2033, adopted December 2018

Table A2.1 Details of Neighbouring Plans for In Combination Effects Assessments	
Local Authority	**Proposed Growth**
London Borough of Redbridge	The Redbridge Local Plan was adopted in March 2018. It aims to deliver up to 17,237 new homes across the borough[60]. The Local Plan directs new development including new homes, shops, businesses, leisure facilities and infrastructure to: (a) The borough's Investment and Growth Areas of: i Ilford; ii Crossrail Corridor; iii Gants Hill; iv South Woodford; and v Barkingside. (b) The borough's main town centres. (c) Other identified Opportunity Sites. The objectives of the Local Plan include increasing energy efficiency, encouraging sustainable patterns of transport, improving access to employment, supporting the strategic industrial Locations in the borough, and protecting conditions for biodiversity.
Epping Forest District	The adopted Local Plan is dated 2006. An updated Local Plan has been prepared for the period 2011-2033 (Submission version dated December 2017) which made provision for a minimum of 11,400 new homes through: • The creation of Garden Town Communities around Harlow; • Development of previously developed land and some open space land within existing settlements; • Development of previously developed land within the Green Belt; Greenfield/Green Belt land on the edge of settlements; • Development of some grades of agricultural land; and • Development of some smaller sites in rural communities. Most development is to be directed to Harlow (circa 3,900 new homes), followed by Epping (1305), Loughton (1021), Waltham Abbey (858) and North Weald Basset (1050).

[60] Redbridge Local Plan 2015 - 2030

Table A2.1 Details of Neighbouring Plans for In Combination Effects Assessments	
Local Authority	**Proposed Growth**
	Following examination, the Inspectors report (dated 2nd August 2019) concluded that the Local Plan is not currently sound and requires further major modifications before it can be accepted. Issues include air quality and recreation/urbanisation effects on Epping Forest SAC identified within the plan HRA which require further investigation and mitigation.
The London Plan, 2019 (intend to publish version)	The London Plan recognises the deprivation within Waltham Forest, and clearly sets out strategy to deal with this. For example, the London Legacy Development Corporation (LLDC), which involves several local authorities having a coordinated response to issues in the area surrounding the Queen Elizabeth Olympic Park.
Harlow District Council	A new Local Plan is currently being prepared. The Pre-Submission Publication Local Plan May 2018 which makes provision for 9,200 dwellings. Modifications of the Plan is currently being undertaken following examination.
East Hertfordshire District Council	The Local Plan was adopted 2018 and covers the period 2011-2033. The plan makes provision for 18,458 dwellings.
Uttlesford District Council	A new Local Plan is currently being prepared and is at an early stage. Councillors decided to withdraw the draft Uttlesford Local Plan 2019 and start a new plan at an Extraordinary Council Meeting on Thursday 30 April 2020.
Broxbourne Borough Council	A new Local Plan was adopted on Tuesday 23 June 2020. The Local Plan guides development up to 2033 and makes provision for over 7,700 new homes.
Brentwood Borough Council	A Local Plan 2016-2033 (dated 2019) was submitted for examination. The plan makes provision for 7,752 new homes during the plan period.
London Borough of Tower Hamlets	The Local Plan which guides development until 2031 was adopted in January 2020 and makes provision for at least 58,965 new homes.

Table A2.1 Details of Neighbouring Plans for In Combination Effects Assessments	
Local Authority	**Proposed Growth**
London Borough of Barking and Dagenham	A new Local Plan is being developed. Consultation on a Regulation 19 Local Plan closes on 29 November 2020. The Council will support the development of 50,000 new homes and 20,000 new jobs across the borough. This will be largely achieved through intensification and redistribution of the borough's industrial floor space and complementary commercial uses.

clearlead

Appendix 3 – Consultation Comments Received on Regulation 18 HRA Report with Responses

Consultation body (if applicable)	Issues Raised	Summary of action taken/ Comments	Resolved ? Y/N
Natural England	**Planning Consultation: Waltham Forest London Borough Local Plan 2020 - 2035 Strategic Policies (LP1)** Thank you for your consultation on 26th October 2020, received by Natural England on the same date. Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development. We recommend this response is read in conjunction with our response to the Waltham Forest Local Plan (LP2) – Site Allocations and associated HRA report.	N/A	N/A
Natural England	<u>The Plan's Vision and Strategic Objectives</u> We welcome the inclusion of "Protecting and enhancing the natural environment" as a golden thread that will shape the Local Plan. We particularly welcome the inclusion of Strategic Objectives 11, 12, 13 and 14 relating to blue and green infrastructure; protecting, restoring and enhancing the Borough's natural environment and the Borough's European sites; and climate change resilience.	N/A	N/A

Natural England	Plan Policies across the Sections We are pleased to see a consideration of the natural environment throughout the Local Plan and provide the following comments: • Policy 5- Management of Growth. This policy refers to Lea Valley Regional Park SAC and RAMSAR. Please note the site is an SPA not SAC, and is listed under the spelling Lee Valley SPA and RAMSAR.	Typo has been corrected in the modifications.	Y
Natural England	• Policy 50 – Promoting Health Communities. We in particular welcome section H. recognising the role of public green and open spaces for healthy and sustainable communities. We support aspirations to enhance and improve access to these open and green spaces, where appropriate.	N/A	N/A
Natural England	• Policy 56- Delivering High Quality Design. We support inclusion of the points relating to provision of urban greening measures to maximise biodiversity and ecological value; provision of multi-functional green spaces; and incorporation of design measures that increase climate change resilience.	N/A	N/A
Natural England	• Policy 57- Taller and Tall Buildings. We support Point F relating to the need for consideration of environmental impacts that may arise from tall buildings.	N/A	N/A
Natural England	• Policy 63- Active Travel. We welcome inclusion of wording relating to ensuring improvements to access routes or green routes would not result in adverse effects on the integrity of the Epping Forest SAC (EFSAC).	N/A	N/A
Natural England	• Policy 89- Sustainable Design and Construction. We welcome Point H. relating to maximising urban greening, blue and green infrastructure that will also help improve biodiversity.	N/A	N/A

Natural England	Section 17 Protecting and Enhancing the Environment Policy 79- Green infrastructure and the Natural Environment We welcome this policy and its consideration of green infrastructure in particular relating to open and green spaces. We also welcome Point F. relating to the need to consider potential impact pathways on EFSAC from any access improvement works. We highlight however, in line with the London Plan's description in Chapter 8, that green infrastructure includes more than just green spaces; it can include street trees, green roofs, natural and semi-natural drainage features etc. We therefore recommend additions to the policy wording itself to better reflect the full range of green infrastructure that can and should be secured in the borough to help bring biodiversity benefits, enhancement to the existing green infrastructure network, and green spaces/visual enhancements for borough residents to enjoy.	Policy not changed. Sites of Importance to Nature Conservation(SINC) Local Green Space (LGS) have been added to the policy but the change does not address the suggestion. Natural capital assets and trees are mentioned in the supporting text.	N/A
Natural England	Policy 80- Parks Open Spaces and Recreation Parks and open spaces are important spaces for wildlife and biodiversity alongside people. We note in this policy that the Council has a "Parks and Open Spaces Strategy" which ensures all parks in the Borough will be enhanced and retained. A large part of the SANGS strategy for EFSAC relates to biodiversity and accessibility improvement works at existing parks in the Borough to unlock visitor capacity and divert recreational pressure away from EFSAC. We remind the Council that any park improvement works from developer contributions as part of the SANGS strategy should be in addition to any existing commitments to improvement works in the Parks and Open Spaces Strategy. In other words, developer contributions for EFSAC mitigation should not be funding works which otherwise would have been delivered by the Council's Parks and Open Spaces Strategy; there must be additionality.	To be noted for SANGS strategy.	N/A

Natural England	Policy 81 – Biodiversity and Geodiversity We suggest some reorganisation of this policy. We would suggest starting with Points H-K regarding protecting existing designated biodiversity sites and geological sites from adverse effect. Point I. could be merged with Point H. and we ask whether other designated sites should be added to the list of Walthamstow Reservoirs SPA, Walthamstow Wetlands and Walthamstow Marshes SSSI; there may also be some overlap between Point I. here and Policy 84. We would then list the points that relate to biodiversity opportunities and biodiversity net gain, with a suggestion that biodiversity net gain as a policy requirement could be made more prominent.	Policy has been amended as suggested by LBWF officers. Changes reflected in the LP1 SA Report and HRA Report.	Y

Natural England	Policy 83 - The Epping Forest and the Epping Forest Special Area of Conservation We welcome the inclusion of a separate policy for Epping Forest SAC. Our comments are as follows: • We recommend adding to the first sentence “The Council will protect and enhance the natural environment of the Epping Forest and its Special Area of Conservation (SAC) and seek to ensure that development proposals contribute to the avoidance and mitigation of adverse recreational…” • This policy needs to be clarified with regard to overlapping numbers: “1-10 residential units” in point i and “10-99 units” in point ii. • For point i, where “maximum ecological benefit” may be open to interpretation on the level of benefit required to be delivered, we would instead suggest that biodiversity net gain is delivered. A percentage increase could be decided and calculated using Natural England’s Biodiversity Metric 2.0. • We remind the Council of Natural England’s interim advice letter dated March 2019 which outlines the avoidance and mitigation measures required for developments of different sizes and in different Zones of Influence (ZOI) of EFSAC. For larger scale residential development (0-6.2km ZOI and 100 units plus), the interim strategic solution requires a SAMMs contribution in addition to a SANGs package. As a result, we recommend additional wording to point iii. stating “This is in addition to the above to provide maximum ecological benefit [or biodiversity net gain as explained above] on site and appropriate per unit SAMMs contributions”. This will ensure the policy mitigation measures are in line with the interim strategic solution. • Following on from the previous bullet point, the interim guidance letter requires all minor developments in the 0-3km ZOI to contribute SAMM payments. SAMM payments are currently not being collected on minor	Policy amendments considered following meeting with the oversight group on 21/1/21. Amendments now made: - 'adverse' added to opening sentence of policy. - threshold numbers have been amended to 1-99 units to contribute to SAMMS and above 100 will contribute to SAMMS and SANGS in accordance with the SPD. - maximum ecological benefit removed. Improvement of 10% biodiversity net gain in line with Defra Biodiversity Metric 2.0 (or subsequent version) included in Policy 81. - All new development within the (6.2km) Zone of Influence (ZOI) of the boundary of the Epping Forest SAC will contribute to SAMMS - mitigation and avoidance measures being in place prior to occupation is	Y

	developments (<10 residential units) as the Council is collecting more from major developments (>10 units) to cover the mitigation costs from minor developments. This approach has been previously agreed with NE but should be written up in the supporting text and HRA. • Following the email from the City of London Conservators of Epping Forest dated 10/12/2020, we flag to the council that SAMM contributions per dwelling will likely be increasing. SAMM contributions will be discussed at the next EFSAC Oversight Group meeting on 21st January 2021. It may be the case following this meeting that the council may wish to revise the above approach to SAMM collection on minor vs major developments, in which case the policy should be amended as appropriate. • We advise the addition of a further point to this policy stating that appropriate avoidance and mitigation measures (i.e. SAMM/SANG) will be secured prior to development. • For comments on Point C, we direct the Council to our comments on the Site Allocations Appropriate Assessment for Urbanisation Effects at EFSAC response. There may need to be some amendments to this policy point following further discussion.	included in policy 81. Comments addressed further in LP2 HRA.	
Natural England	Policy 84 – The Lee Valley Regional Park We welcome the inclusion of a separate policy for the Lee Valley Regional Park. We advise some additional wording to before the sentence at Point E along the lines of “Development proposals will not normally be granted planning permission where they pose adverse direct or indirect effects on any land or area identified with the Lee Valley SPA/Ramsar”. We also advise a sentence is added to Point F stating that planning applications that need to consider urbanisation or recreation effects will be encouraged to have early	Suggested changes have been made to the policy.	N/A

	discussions and engagement with Natural England on potential mitigation measures.		
Natural England	Section 18 Addressing the Climate Emergency We support the inclusion of this section in the Local Plan Strategic Policies. We in particular support Policy 89 -H. and Policy 94 – C. which start to recognise the role of maximising nature-based solutions and blue-green infrastructure in sustainable development. We would be pleased to assist the Council in the delivery of climate change adaptation and resilience measures across the borough, and have previously highlighted key NE resources such as the Natural Capital Atlas and the Climate Change Adaptation Manual. These resources could be used to create a borough-wide adaptation plan by creating resilient natural environments in the green space network across the Borough. Such a strategy could tie in well with biodiversity net gain aspirations and potentially with the recreational strategic solution at EFSAC.	N/A	N/A
Natural England	**Planning Consultation: Waltham Forest Local Plan (LP2) – Site Allocations and associated** **Habitats Regulations Assessment** Thank you for your consultation on 24/09/20 received by Natural England on the same date. Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development. We have reviewed the Waltham Forest Local Plan (LP2)- Site Allocations alongside the associated Site Allocations Plan Habitats Regulations Assessment Report (HRA). We have structured our response to the LP2 consultation around our comments on the HRA. Site Allocations Habitats Regulations Assessment Report	N/A	N/A

	We highlight our response to the Waltham Forest Local Plan (LP1) – Strategic Policies for comments on specific policy wording. Our response to the LP1 consultation should be read alongside this response.		
Natural England	<u>Appropriate Assessment: Air Quality on Epping Forest SAC (EFSAC)</u> We will comment on this section of the HRA when updated with detailed air quality assessment results; we currently cannot assess whether Likely Significant Effect (LSE) alone and in combination can be ruled out. We recommend the HRA assesses air quality using Natural England's guidelines. The Council has recently requested advice from NE on preliminary air quality assessment results and we will work with them on this in due course.	Further consultation is underway with regards to air quality assessment and mitigation work undertaken since this comment was provided.	N/A
Natural England	<u>Appropriate Assessment: Recreational Pressures on Epping Forest SAC</u> We agree that an Epping Forest SAC SANG Strategy would need to be developed and agreed with us prior to the Local Plan being adopted. We have not currently seen any such borough - wide strategy and as a result cannot agree with the conclusion of this section so far that there would be no LSE on EFSAC f rom recreational pressures. Going forward, we would need to see a detailed borough-wide SANG strategy covering the bullet points outlined on page 33 of the HRA report ; this would provide a level of certainty that appropriate mitigation would be delivered f or the housing targets. For example, we have seen a preliminary SANGS strategy f or Leyton Jubilee Park in South Waltham Forest. This SANGS strategy currently provides detailed costings for a range of accessibility and biodiversity improvement works in the Park which have been agreed with ourselves. We would however need more detail on how these works will be secured and funded in perpetuity, as well as how many residential units would be covered by this SANGS strategy and why. To elaborate further, we emphasise a need for the SANGS strategy to justify how enhancement works on existing and new green spaces	SANG Strategy SPD is being developed which addresses the points raised and will be agreed with NE prior to adoption of the LP part 2. Policy 81 requires mitigation and avoidance measures to be in place prior to development. HRA conclusions updated. Both LP1 and LP2 HRA Reports updated to include information about SAMMS contributions for developments now that Policy 83 has been amended to clarify that SAMMS	Y

	will unlock visitor capacity and divert recreational visits away f rom EFSAC, including in relation to existing visitor experiences and numbers on site. There could also be a discussion of other considered avoidance/mitigation measures, and what (if any) details are to be confirmed at project level. Where SANG creation/enhancement costs are felt to be too large, the Council may wish to consider spreading the cost by charging smaller developments (<100 units) per unit SANG contributions. An overarching SANGS strategy covering all of the allocated housing development (27,000 units) in the borough needs to be produced and agreed with Natural England in order of or a conclusion of no LSE to be reached. NE is keen to continu e working with the council to deliver this strategy. We also highlight that the City of London (CoL) Conservators of Epping Forest may have some mitigation solutions which we recommend the Council explores with us and CoL. Strategic Access Management Measures (SAMM) contributions are required for all net new dwellings in Waltham Forest. Current SAMM costings are part of the Interim Approach to managing recreational pressure on EFSAC, and therefore there is ongoing work in finalising the long -term strategic solution. Following the email f rom the City of London Conservators of Epping Forest dated 10/12/2020, we f lag to the council that SAMM contributions per dwelling will likely be increasing as part of this move beyond the interim solution. SAMM contributions will be discussed at the next EFSAC Oversight Group meeting on 21st January 2021. SAMM payments are currently not being collected on minor developments (<10 residential units) as the Council is collecting more f rom major developments (>10 units) to cover the mitigation costs f rom minor developments. This approach has been previously agreed with NE but should be written up in the HRA.	payments are required for all developments within 6.2km of the EFSAC boundary.	

Natural England	Please note Policy 83 of the Local Plan Strategic Policies document should be clarified with regards to overlapping numbers ("1-10 residential units" in point i and "10-99 units" in point ii), although following discussions at the January 21st meeting, the council may wish to revise this approach entirely, in which case the policy should be amended as appropriate. We note that the HRA concludes that an in combination assessment cannot be concluded as Epping Forest District Council's Local Plan has not yet been found sound. We remind the council that any live plan or project that is in the public domain with proposed allocations and proposed impacts can be assessed as part of the in combination assessment.	Thresholds have been altered in LP1 Policy 83. Amended assessment of LP1 in combination effects to conclude that an adverse effect on Epping Forest SAC is currently predicted due to in combination effects from EFDC Local Plan.	Y
Natural England	<u>Appropriate Assessment: Recreational Pressures on Lee Valley SPA/Ramsar</u> We agree with the conclusions of this section that LSE from recreational effects alone and in combination can be ruled out, although considering recreational effects at project-level HRA f or specific developments would still be advisable. Housing developments adjacent to/near the site, particularly in the Blackhorse Lane strategic location, that market themselves in relation to Walthamstow Wetlands or the Lee Valley Regional Park (e.g. promoting them as doorstep recreational green spaces) should consider contributing to the Walthamstow Wetlands accessibility project. We would welcome a discussion with the council about future funding and plans for Walthamstow Wetlands. We suggest our comments here could be added to the HRA and expanded as appropriate.	CLC to update HRA report to include information provided. LBWF to discuss funding and plans for Walthamstow Wetlands. Information on the accessibility project unavailable. Added to the recreational pressures section regarding project level HRA and effects discussed further in Section 9: Urban Effects. Email correspondence with Natural England in July 2020[61]	Y

[61] Email from Natural England dated 02/07/20

		confirmed that it is only sites adjacent to Lee Valley SPA and Ramsar site which could result in an LSE in relation to urban effects and recreation. This information has been used to determine an appropriate buffer zone of 50m around the SPA and Ramsar.	
Natural England	<u>Appropriate Assessment: Urbanisation Effects on Epping Forest SAC</u> The AA currently concludes that LSE can be ruled out as developments within 500m of EFSAC will be required to contribute SAMM payments, and produce project level HRA reports. We understand that CoL have concerns surrounding urbanisation effects and do not agree that LSE can be ruled out or that mitigation should be left to project-level HRAs. CoL are currently looking at other Strategic Solutions such as Burnham Beeches where an exclusion zone has been established. NE has not seen any evidence currently that would require an exclusion zone for development around EFSAC, but we would, as an evidence-led organisation, consider any such information shared with us. Considering urbanisation effects at project level, larger developments/site allocations may be expected to provide bespoke mitigation that provides a combination of benefits including SANG, biodiversity enhancement, green infrastructure and potentially, new recreational facilities. These sorts of land use within a development could act as a buffer to absorb some of the urbanisation effects before the adjacent SAC. Any mitigation measures would need to be agreed with NE, and we would recommend early engagement with us to discuss appropriate measures. Mitigation measures would need to be	The 500m exclusion zone around Burnham Beeches SAC was identified by Footprint Ecology 2012. This buffer zone has not been identified during the Footprint Ecology work on Epping Forest SAC to date. Suggest engagement with developers, particularly at Whipps Cross to ensure appropriate mitigation measures are being included within the plans. This was discussed further with CoL and NE in a video call on 17/03/21 and the approach to urban effects agreed in a further video call	Y

	delivered prior to occupation and in perpetuity. We would in particular like to highlight Site allocation SA17 -Whipps Cross Hospital due to its size and location in relation to EFSAC. We would advise the applicant to meet us f or pre-app advice through our Discretionary Advice Service. A charged advice request form should be completed and sent to consultations@naturalengland.org.uk . We recommend that CoL are invited to discussions on this site allocation. There are a number of other Site Allocations within the Local Plan that fall within the 500m urbanisation zone identified in the HRA. We would advise these developments to also consider using our Discretionary Advice Service as above, to discuss potential mitigation measures required under the Habitats Regulations. We highlight to the Council the inherent risk in leaving the detailed HRA to project -level analysis rather than detailed assessment at Local Plan level, as there is the potential f or LSE to not be ruled out at project-level stage. We highlight guidance in the HRA Handbook (see F.10.1.5 in Tyldesley, Chapman, & Machin, 20201) which makes clear that mitigation measures at a lower tier of plan making (in this case project-level HRAs) can only be relied on if the higher level plan assessment (the Local Plan HRA) cannot use fully conclude an assessment of potential impacts, and where there is room for the lower tier of plan making to adequately provide mitigation. We would argue that there is scope f or more detailed analysis of Urbanisation Effects within this Local Plan HRA and therefore do not wish to comment on whether LSE can be ruled out.	on 13/10/21 in which a 400m buffer was agreed.	

Natural England	<u>Appropriate Assessment: Urbanisation Effects on Lee Valley SPA/Ramsar</u> Overall we agree with the conclusions of this section and we agree with the sites identified (SA33, SA34, SA35 and SA36), which would need to include project level HRAs (as stated in Policy 84 of LP1-Strategic Policies) that address urbanisation effects on the Lee Valley SPA/Ramsar . This should include predation from cats and tall buildings that may potentially be higher than the reservoir banks. The HRA states “cats are not predicted to have an effect on the SPA and Ramsar feature as the likelihood of a cat regularly predating gadwall, shovelar or bittern is remote”. This conclusion should be strengthened by specific context of the development coming forward e.g. if the housing development is a tower block of flats, it may be that residents are less likely to own cats.	LP2 HRA Report amended to provide the information suggested.	Y

Natural England	<u>Other comments</u> • Please note that following the People Over Wind European Court Judgement, if any mitigation measures are required then this impact pathway must continue on to a full Appropriate Assessment. As all housing allocations in Waltham Forest are within the EFSAC Zone of Influence, all developments will need to produce a project-level HRA and AA. As competent authority, Waltham Forest Council should ensure each development has the appropriate HRA/AA conclusions recorded. NE have had permission f rom Havant Borough Council to share their HRA/AA template with Waltham Forest if this would be helpf ul in producing a standard, easy-to-use template. • The Council should fully consider comments made by the CoL Conservators of Epping Forest with regards to EFSAC, and continue working with both us and CoL to deliver development in compliance with the Habitats Regulations. • Site Allocation SA48 may need to consider SPA/SSSI bird flight lines due to its location in the linear corridor of reservoirs in the Lee Valley Regional Park. This may be an issue if the site allocation proposed especially tall buildings or bright lighting. • Chingford Reservoirs SSSI- Site Allocations in Sewardstone Road strategic location will need to demonstrate that the development will not damage or destroy the features for which the SSSI was notified.	SA of Site Allocations in Sewardstone Road to consider potential effects and mitigation required for Chingford Reservoirs SSSI. It is considered that Policy 81 - Biodiversity and Geodiversity provides adequate protection to ensure that bird flight lines are considered in the design of developments in the linear corridor of reservoirs in the Lee Valley Regional Park.	Y
City of London	RESPONSE of THE CITY of LONDON CORPORATION as CONSERVATORS of EPPING FOREST to LONDON BOROUGH of WALTHAM FOREST SUBMISSION LOCAL PLAN 'SHAPING THE BOROUGH' - (REGULATION 19) PUBLIC CONSULTATION 11th December 2020 <u>1. Summary of key issues</u> Thank you for consulting the City of London Corporation, as the Conservators	We disagree that the HRA is non-compliant. Follow up discussions have been held in relation to air quality, recreation and urban effects between CLC, LWBF, NE and CoL.	Y

	of Epping Forest, on the London Borough of Waltham Forest's (the Borough) Submission Local Plan 'Shaping the Borough' Regulation 19 public consultation. The Chairman of the Trustees of the Epping Forest Charitable Trust – the Epping Forest & Commons Committee - is responding on behalf of the trustees and this response will be received and discussed at Committee in January 2021. Although we welcome many of the additions and changes to the Regulation 19 document since the Regulation 18 consultation of September 2019, and particularly the completion of the Green & Blue Infrastructure Strategy, we remain concerned about the lack of clear off-Forest mitigation measures for the Epping Forest Special Area of Conservation (EFSAC). In addition, we take issue with the conclusions of the Local Plan Habitats Regulations Assessment (HRA) that we consider is not compliant with the Habitat Regulations 2017. As a result, although there is much we welcome in the Submission Local Plan, we are clear that, in its present form, the Plan is not compliant with the Habitat Regulations 2017 and that it would not protect Epping Forest as a whole from the adverse impacts from the quantum of development proposed in Plan Policy 2. We remain concerned that our overall impression from the Local Plan is that Epping Forest's resilience to cope with the intensification of development in the Borough (Policy 2) is being taken for granted. We would urge your Council to review the proposed intensification as it impacts on the Forest and ensure that develop proportionate and precise mitigation measures alongside all detailed development masterplans Therefore, Epping Forest Officers would welcome the opportunity to further discuss the detail of our Regulation 19 comments as part of the section 33A 'Duty to Co-operate in relation to the planning of sustainable development' duty (Planning and Compulsory Purchase Act 2001, as amended by the Localism Act 2011).	LBWF to respond to point regarding reviewing the intensification of development.	

City of London	Key concerns and issues are: • the quantum of development proposed in the Submission Local Plan (LP1) • a non-compliant HRA which does not justify its conclusions in relation to the impacts of the likely significant effects on EFSAC of the Local Plan alone; • the lack of SANGs Strategy with specific measures to provide certainty of mitigation for Epping Forest Special Area of Conservation (EFSAC); • the lack of costed and precise SAMMS mitigation measures; • the need for an air quality assessment; • the need for a comprehensive EFSAC mitigation strategy to be agreed by all local authorities under a revised MoU; • improved recognition for the City Corporation's current pattern of visitor facilities in the Borough and the Forest's 45% contribution to the Borough's green space provision	We disagree that the HRA is non-compliant. SANGS strategy is under development and should be available before the examination of LP1. Costed SAMMS was provided by CoL in Dec 2020. Air quality assessment has been completed and a meeting held between CLC, Kairus, LBWF, NE and CoL in January 2021. An air quality mitigation strategy has been prepared and is being consulted on with NE and CoL. A comprehensive EFSAC mitigation strategy to be agreed by all local authorities would be a robust approach however LBWF does not have authority to lead on it. Final bullet point to be responded to by LBWF.	Y

City of London	HRA - Proposed Submission Habitats Regulations Assessment (21st Oct 2020) We note that the HRA identifies likely significant effects for Epping Forest relating to: • Recreation • Urban effects • Air quality (increased road traffic) We further note that, at appropriate assessment stage, the HRA concludes: Adverse effects on integrity from the plan alone are ruled out for recreation due to the mitigation set out in Policy 83 (SANG and SAMM) but in-combination effects cannot be ruled out due to uncertainty around the EFDC local plan.	N/A	N/A
City of London	Adverse effects on integrity from the plan alone are ruled out for urban effects due to the requirement in Policy 83 for project level HRA to rule out adverse effects on integrity for all development within 500m of the SAC. In-combination effects cannot be ruled out due to uncertainty around the EFDC Local Plan and how that Plan will address urban effects.	N/A	N/A
City of London	No conclusion is reached on air quality. The HRA states that an air quality study is underway and an addendum will be produced in November 2020 to inform consultation.	N/A	N/A

City of London	We cannot agree with the HRA's conclusions on these matters for the reasons below The spatial strategies within the Submission Local Plan would potentially lead to 27,000 new homes within 3km of the SAC. The HRA acknowledges this but still rules out adverse effects on integrity alone. This does not seem tenable in the absence of comprehensive, secured mitigation because such an increase in the local population presents major risks to the SAC's integrity from all the identified likely significant effects. 4.1a The HRA and reliance on Policy 83 Policy 83 in the Local Plan is relied on for mitigation by the HRA in its appropriate assessment. This refers to a zone of 6km, which presumably means the recreational Zone of Influence of 6.2km which has been agreed by the SAC Oversight Group of local authorities and Natural England in June 2020. This Zone of Influence was established from the evidence in the Epping Forest Visitor Surveys of 2017 and 2019 (Footprint Ecology). Policy 83 requires: • 1-10 residential units expected to ensure the development provides "maximum ecological benefit"; • 10-99 units will contribute to SAMMs, according to an SPD to be produced • 100+ units will provide SANGs, according to an SPD to be produced.	Zone is amended to 6.2km.	Y

City of London	<u>This mitigation does not seem sufficient nor certain enough to justify the HRA conclusion that the Local Plan alone will have no adverse effects on the integrity of Epping Forest SAC with regards to recreational pressure</u> There is no analysis within the HRA of what proportion of growth will come forward in the different sizes of development. Developments of 1-10 units do not appear to be required to undertake any SAC mitigation and it is unclear what the phrase "maximum ecological benefit" might mean. Reference is made to "Policy 86" although this is taken to mean Policy 81. However, the measures in Policy 81, although positive and aspirational, do not seem to provide a clear mechanism of mitigation for the SAC habitats and qualifying features. Maximum ecological benefit is not a recognised metric as far as we are aware. 4.1b Planning Inspector's decision The recent Planning Inspector's decision in the appeal case for 69, Browning Road, Leytonstone E11 (Appeal Ref: APP/U5930/W/20/3245750) was clear about the pathways for adverse impacts, stating: "Additional recreational activity would, alone and in combination with other development in the area, be likely to have significant adverse effects through damage to vegetation, erosion of soils and reduction of habitat continuity". He makes it clear that justifications need to be provided as to why developments of below 10 units do not need to contribute to the mitigation tariff or provide alternative mitigation measures to protect the SAC from recreational pressure. The HRA does not provide clarification on this.	Policy 83 in LP1 now refers to developments of 1-99 unit being required to make SAMMS contributions. 100+ units required to make SAMMS contributions and SANGS in line with forthcoming SANGS SPD. LP2 HRA Report identifies sites allocated with capacity under 100 units.	Y

City of London	4.1c Uncertainty about mitigation For developments of 10+ units there is no mitigation package secured either. It is not clear why some developments would only contribute towards SAMM and others only towards SANG. SANG and SAMM are likely to work best together, as a package, and it would seem sensible that all development should contribute towards both. Based on the wording in the HRA it is clear that the SPD is yet to be produced and could for example, with respect to SANGs, be a strategic document covering multiple authorities or specific to the Borough. Given such fundamental uncertainty around the mitigation it is our view that the HRA should be highlighting that uncertainty, rather than drawing a conclusion of insignificant effects alone. The detail of the package of SAMMS and SANGS needs to be fully explored in the HRA to demonstrate sufficient mitigation is in place in order to conclude no adverse effects on integrity, and this will be required in the HRA prior to the Local Plan being adopted.	SANG and SAMM contributions now clarified in policy 81. Recommend borough-wide SANG strategy developed prior to submission of LP1 and LP2. LP1 HRA Report updated prior to submission.	Y
City of London	4.1d Sites within 500m of the SAC and urban effects Urban effects are ruled out in the HRA, for the Plan alone, due to the requirement in Policy 83 that all development within 500m will undertake project level HRA to ensure urban effects are addressed. It is not clear why these project level HRAs would be limited to the narrow range of urban effects listed in the HRA when recreational impacts are also likely to be more difficult to mitigate at this distance from the Forest. This project level approach creates a number of challenges. Given the nature of urban effects and their cumulative effects, it may not be possible to rule them out at project level. Options for mitigation will be limited. In addition, the range of urban effects chosen in the HRA seems to be limited as highlighted above. It is not clear from the HRA how much development is expected within 500m and whether these will be relied on to achieve the spatial strategy/levels	Further work on urban effects in the LP2 HRA has been discussed with NE, CoL and LBWF on 17/03/21 and on 13/10/21. Suggest engagement with developers, particularly at Whipps Cross to ensure appropriate mitigation measures are being included within the plans and this has now been included in LP1 policies 83 and 84.	Y

	of growth in the Plan. However, in the proposed site allocations some very large developments are proposed, including up to 1700 units at the Whipps Cross hospital site alone (Policy 9 and please see comments also in section on Site Allocations LP2 below). We would have expected the HRA to give this information. We would also expect the HRA to set out the scope for the project level assessment and sources of information that may not be available in the Plan level assessment. This would then show why the Plan level HRA had not been able to predict the impacts.		
City of London	4.1e Plan level versus project level assessments Guidance in HRA Handbook (see F.10.1.5 in Tyldesley, Chapman, & Machin, 20201) is clear that a plan-making body may only rely on mitigation measures at a lower tier of plan making if the higher level plan assessment cannot reasonably predict any effect on a European site in a meaningful way and where the later stage assessment will have the flexibility to enable adverse effects on integrity to be avoided. It is likely to be very challenging for project level assessment to work effectively and the HRA fails to consider this. **Given the HRA conclusion that adverse effects on integrity from urban effects cannot be ruled out in-combination, there must clearly be concern that any project level HRA could not eliminate the effect entirely and that residual effects would remain. This is not discussed or made apparent in the HRA report.**	Further work on urban effects in the HRA discussed with NE, CoL and LBWF on 17/03/21 and 13/10/21. Clarification wording to be added to the HRA Report for LP1. Additional assessment has been undertaken for LP2 at Regualtion 19 stage which focuses on the two key areas of concern for CoL - South Leytonstone and Chingford identified in a LUC report	Y

City of London	4.1f Air Quality Due to the lack of a completed air quality study, the HRA is unable to conclude that there would not be adverse impacts from air pollution due to traffic growth under the Local Plan (Section 8.3, page 41). Therefore, we look forward to seeing the completed air quality study and working closely with the Council and Natural England, as we have done in the case of the Epping Forest District Local Plan recently. We acknowledge a recent invitation to a meeting to discuss the air quality issues with your Council's officers and we will attend when the meeting is convened in early 2021.	Draft air quality assessment has been prepared and was discussed with CoL and NE in January 2021. An Air Quality Mitigation Strategy is being prepared.	Y
City of London	4.2a Vision Statement (page 9) In responding to the Local Plan vision at Regulation 18, we proposed that the Conservators' Epping Forest Management Strategy vision was outlined in the Plan in order to demonstrate the intention for future close working between the Council and the Conservators to protect the Forest and also in recognition of Forest Land's significant role in the provision of green space in the Borough. **The Epping Forest charity, funded by the City of London Corporation as The Conservators of Epping Forest, provides an estimated 45% of the green space provision in the London Borough of Waltham Forest.** We welcome Strategic Objective 13 (page 12) and we will certainly continue to actively work in partnership with your Council. However, given the significance of Forest Land to the Borough's character and its populations well-being and health we would repeat our request for our Epping Forest Management Strategy Vision to be embedded more clearly within in the Council's Local Plan vision. This would underscore support for the holistic approach to Forest protection that is clearly flagged in the Green & Blue Infrastructure Strategy and which Policy 83B seems to convey.	Noted.	N

City of London	4.2b Policies 2, 3 and 4 As stated in the introduction and elsewhere, The Conservators remain concerned that the quantum of growth and some of the locations for this growth seem likely to cause adverse impacts on the Forest. There is not sufficient mitigation outlined in the Plan and nor is it secure. More detailed explanation of these concerns are set out above (in relation to the HRA) and below in relation to the site allocations. We fully recognise that Whipps Cross Hospital redevelopment is a key infrastructure project for both the Borough, and a much wider area beyond, but we question the quantum of development, and likely traffic generation, proposed in this housing-led approach without any clear mitigation identified in the Strategic Plan HRA.	Noted.	N
City of London	4.2c Policies 5 and 6 Policy 5C and D and Policy 6I should be important constraints within the overall Plan. However, the gaps in the Plan HRA mitigation measures and the scale of the proposals around sites like Chingford Green Conservation Area (Site Allocation LP2 - SA58) would seem to bring into question the effectiveness of this Policy in the face of the intensification of development and scale of proposed housing.	N/A	N/A

City of London	4.2d Policy 68 The proposal for car-free developments and sustainable transport in Policy 68 is welcome. However, although London is probably unique in the UK in terms of its level of public transport provision, a modal shift of 100% of residents from cars to other modes of transport seems highly ambitious. From academic studies of car-free developments, percentage modal shifts achieved elsewhere in the UK (e.g. Smarter Choice Schemes in Sustainable Travel Towns) are considerably lower despite significant investments. It is not clear to us that S106 agreements will be effective in ensuring this level of modal shift. Whether proposed large developments like Whipps Cross (Policy 9), with around 1,700 units, can remain car-free seems questionable. As discussed below they certainly would not be free of significant vehicular traffic generation.	The effectiveness of mitigation measures will be discussed in the air quality mitigation strategy.	N/A
City of London	4.2e Policies 72 to 75 We welcome these four policies and particularly the Council's active reviewing and updating of the Archaeological Protection Areas/Zones (APA) through the commissioning of a detailed GLAAS report. We also are pleased with the updating of the Chingford Green Conservation Area with an excellent consultation draft appraisal. We will respond to this latter report in January 2021. We also look forward to working with Council Officers to better understand management requirements for the proposed extension to the APA around the City Corporation-owned Queen Elizabeth's Hunting Lodge.	N/A	N/A

City of London	4.2f Policy 79 We welcome Policy 79F which seeks to protect EFSAC from increased recreational pressure while promoting green corridor connections. However, this Policy could also emphasise the importance of Epping Forest as a unique cultural and wildlife landscape and one that could act as a "building block" for the enhancement of the Borough's overall green environment. Policy 79A, this could be modified to include reference to the Forest's fundamental importance to the Borough's identity, and indeed its very name. For example, the first sentence of 79A could read: "The preservation and enhancement of the landscape setting and wildlife of Epping Forest, and other green and blue infrastructure, to ensure the improvement of the quality of open spaces and access to them, as befits the historic origins of Waltham Forest."	Noted.	N
City of London	4.2g Policy 81 Policy 81H provides important protection for biodiversity alongside Policy 79 but the test for the effectiveness of this Policy will be in the response to windfall developments and other applications. The case of 69 Browning Road, highlighted above, suggests that the provision of information about protected sites and biodiversity prior to decision-making on development planning applications may not always ensure the protection envisaged in the Plan policies. Strengthening connections between planning policy and development management work will be key to the success of these policies in the face of the significantly increased development pressure and the likely increase in planning applications that the development management team will face.	Noted.	N

City of London	4.2h Policy 83 We very much welcome intention and scope of this policy as a specific and separate, distinct policy to protect Epping Forest. Not only does this allow proper consideration of the protection and mitigation measures for the Special Area of Conservation (EFSAC), that Policy 83A seeks to address (but see our comments on the HRA above and on the details below), but it also allows a more holistic approach to the protection of the whole Forest. In this respect the inclusion of amenity and visitor enjoyment, alongside ecological integrity, is particularly welcome in Policy 83B, as this aligns directly with Sections 7 and 9 of the Epping Forest Act 1878 and the purposes of that Act and subsequent amendments. Some additional wording to 83B would also be welcome in recognition of the heritage and landscape importance of the Forest to the Borough's character. For example: "…. delivering enhancements to its landscape where possible and must not contribute to adverse impacts on ecological integrity or heritage features…."	Noted.	N

City of London	However, it should be noted that we have reservations about the effectiveness of this policy and its compliance with the Habitat Regulations 2017, particularly Policy 83A. (I - iii). As such detailed comments on this Policy are made above in relation to the Plan's HRA. In addition, we need to emphasise here our concern with the current text of this Policy. It contains no wording which ensures that mitigation would be in place before development commenced. The Policy simply refers to contributions being made towards mitigation packages, but it does not make clear the timing of any measures in relation to the initiation of site allocations. The Policy contains no thresholds or triggers in relation to mitigation measures that would need to be reached before commencement of works or occupancy of sites. In addition, there is no specificity to the measures referred to in the Policy. No detailed measures are yet agreed for mitigation. Policy 83 refers to the SAMMS and SANGS Strategies. This might be acceptable if those strategies clearly enabled the measures relied on in the Plan to be regarded as secure, but the Interim SAMMS Strategy does not yet provide sufficient detail in respect of the proposed mitigation measures to do this and there is no SANGS Strategy in place. We recognise that the Council intends to work with us and others to produce a SANGS Strategy ahead of the adoption of the Local Plan, and we wholeheartedly welcome this and look forward this work. However, the Policy text's precision will remain important and at this stage qualifying wording is required in our view.	N/A	N/A

City of London	In relation to more precise, secure and defined measures we would draw your Council's attention to the Conservators' costed proposals for on-site SAMMS mitigation (December 2020) that were sent to you under separate heading this month. These were approved by The Conservators for consultation with the local authorities in the EFSAC Oversight Group to ensure in perpetuity avoidance of adverse effects in conjunction with other effective off-site measures	Costed proposals for on-site SAMMS mitigation (December 2020) have since been reviewed. These comments were received after the HRA and LP1 Reg 19 documents were released for consultation.	Y
City of London	It is also not clear how the effectiveness of the Strategies would be monitored and measured and whether, in the face of evidence of residual adverse impacts, further development would be halted until more effective measures were introduced. It is essential, therefore, that qualifying wording is added to this policy to ensure that the Plan can be demonstrated to effectively constrain the development that it provides for until these measures relied upon by the Policy and the HRA have been defined and 'secured'. In order to do this the UK Courts have established that the Plan must include clear and firm policies to eliminate or mitigate the residual risks to the SAC which currently remain.	Further work on mitigation has been discussed with NE and CoL and undertaken in relation to SANGS and SAMMS in collaboration with CoL and NE. Monitoring has since been discussed in calls with NE and CoL on 17/03/21 and 13/10/21.	Y
City of London	4.3a Balance between SAMMS and SANGS Our concerns expressed above about the HRA and Local Plan (LP1) Policy 83A. (i - iii) relate to the funding of the SANGS and the way in which the impacts on the SAC from different sized developments might be mitigated. We also remain concerned about the balance between SAMMS and SANGS given the considerable constraints on providing new green spaces within the	Further work on mitigation has been discussed with NE and has been undertaken in relation to SANGS and SAMMS in collaboration with CoL and NE. See Sections 5 and 7 for further details of the	Y

	Borough and we question how this can be achieved with the quantum of development proposed by the Plan.	mitigation proposed. All developments will contribute to SAMMS. Allocation sites closer to the EFSAC will need to contribute more financially and on site to address potential urban effects. Allocation sites with an indicative capacity of less than 100 do not need to contribute to SANGs in accordance with advice from Natural England[62].	
City of London	4.3b Policy 83 as a separate Epping Forest Policy We welcome the recommendation in paragraph 6.19 to separate Lea Valley and Epping Forest policies to ensure stronger protection for each site. As we commented back in 2012, during the consultation on the Council's Core Strategy then, we consider this a very important recognition for the Forest in the Local Plan. As stated above, we are very pleased that your Council has persevered with this separation of Policies.	N/A	N/A

[62] Interim advice note on the Emerging Strategic Mitigation Strategy for the Epping Forest SAC (NE, 6th March 2019) and updated by their advice contained within the Natural England letter dated 5 March 2021.

City of London	4.3c Cultural and landscape importance of the Forest In paragraph 10.1 we are pleased to see the recognition of the cultural importance of the Forest and, in paragraph 10.2, the listing of it as a key historic landscape. Recognition of these attribute, alongside the Forest's international importance for biodiversity, and its importance as a place of recreation and enjoyment for peoples' well-being and health, is especially important in taking an holistic approach to the protection of the Forest by Local Plan policies.	N/A	N/A
City of London	4.3d Gateways to the Forest Finally, we welcome the details in Table 11.2, and particularly the highlighting of Sewardstone Road and North Chingford (Table 11.2 I and J respectively) as gateways to the Forest .However, this recognition as gateways with options for sustainable transport and access to countryside must be set against the large increases in residential populations proposed with 500m of EFSAC (see our detailed comments below on Site Allocations SA53, SA59 and SA60).	N/A	N/A
City of London	4.4a Allocations within 500m of Epping Forest and the EFSAC Of particular concern to The Conservators are the proposed residential developments within 500m of the Forest boundaries in general, as well as the SAC in particular. We consider that the site allocations choices, densities and design must be modified at the Regulation 19 stage, and in the submission Local Plan itself, to protect the character of Epping Forest and ensure a more clearly "tapered" edge between dense urbanity and the Forest's natural aspect. This is particularly important in North Chingford and Leytonstone, as discussed below, but needs to apply to all place-making within 500m of Forest edges, including its historic green lanes. We would welcome the opportunity to collaborate with your Council in this sensitive approach to design and place-	Discussion undertaken between LBWF, NE, CoL and CLC regarding the scope of the HRA of LP2 on 17/03/21 and 13/10/21 and to what degree these potential effects (along with urban effects) can be assessed at the strategic level. Urban effects has been assessed in more detail at the regulation 19 stage focusing	Y

	making and will be seeking to engage with major developments, such as Whipps Cross and Chingford Library, to this effect.	on two key areas identified by CoL in an LUC report.	
City of London	4.4b Policy 9 South Waltham Forest: Leytonstone allocations 4.4bi Three site allocations in Leytonstone are particularly problematic for the protection of Epping Forest and for the mitigation of adverse impacts. Within 250 to 450m walking distance of Leyton Flats the three proposed developments, at Whipps Cross Hospital (SA17 minimum 1700 new homes - as listed in Policy 9 for South Waltham Forest), The Territorial Army Centre (SA16 minimum 130 new homes) and Tesco's, Leytonstone site (SA20 minimum 650 new homes), would create 2,280 new dwellings. Based on the average household size within the London Borough of Waltham Forest (Office of National Statistics (ONS) 2011 Census) of 2.6, this would lead to a likely population increase of nearly 6,000 people and a concomitant increase in visitor pressure on the EFSAC. None of the developments seem to offer, or are capable of offering, any SANGS provision. The Whipps Cross site could possibly provide more green space should the housing footprint be reduced. However, the size of any green space it might provide seems unlikely to be sufficient to provide a suitable SANGS.	Suggest engagement with developers, to ensure appropriate mitigation measures are being included within the plans. Considered in more detail in the Regulation 19 HRA of LP2.	Y

City of London	4.4bii Car-free Furthermore, although Policy 68 of the Plan proposes that all developments should be carfree, it does not mean that such large developments will not attract large amounts of traffic from delivery and other domestic services to taxis and visitors. This seems highly likely with the proposed Whipps Cross development and traffic volumes, on already congested roads and difficult junctions, would seem set to increase significantly. In our view there needs to be an overall detailed travel plan for major development such as this and it needs to tie in with the air quality study that the HRA will be undertaking. In particular, if car parking facilities are not provided or not sufficient for demand it seems likely that cars will be displaced onto other areas, including Forest car parks.	This is addressed as a part of the air quality strategy as recommended in the air quality assessment. LP1 Policy 65 - Development and Transport Impacts requires travel plans of developments which detail how development will enable walking, cycling and public transport use amongst users, including agreed targets, implementation and funding, and monitoring regime.	Y
City of London	4.4c Policy 11 North Waltham Forest: North Chingford & Sewardstone Road allocations 4.4ci Together the allocations in these sites, which lie within 500m of the SAC boundaries, amount to around at least 600 new dwellings. Based on the Waltham Forest average household size (ONS 2011) of 2.6, this would result in an increase in population of over 1,500 people and a very significant increase in visitor pressure on the Forest SAC. None of these allocations can provide for SANGS, which is of particular relevance in relation to the proposed SA53 Motorpoint site of a minimum of 385 residential units. In addition, the sites in North Chingford at SA59 and SA60 seem likely to have an impact on the “natural aspect” of the Forest, protected by the Epping Forest Act 1878, and are likely to be to the detriment of this important heritage landscape, adding to light pollution and visual intrusion. In addition to the likely significant ‘in combination’ effects on the SAC, The Conservators are	Suggest engagement with developers, to ensure appropriate mitigation measures are being included within the plans and provide further details within the HRA of LP2. Allocations have been considered again in the Regulation 19 HRA of LP2. Comments in relation to landscape and heritage	Y

	concerned by the scale of these allocations in relation to the Forest boundaries. Such developments adjacent to Forest Land, particularly SA60, do not seem proportionate and would seem likely to conflict with Policy 83B. The number of housing units, as well as the 6-storey height of the building currently proposed for the SA58 Chingford Library, seems to be out of place with this important heritage village green on Forest Land. Chingford Green is a Conservation Area because it represents the only remaining area in the borough that displays the buildings across all the periods of development from rural forest settlement through to the present day (Chingford Green Conservation Area Appraisal and Management Plan Nov 2020, London Borough of Waltham Forest). Its special character derives from the setting, with Forest Land preserved at its heart. In addition to the likely significant effects 'in combination' on the SAC, as discussed above, we are concerned that development on this scale would damage the environs of an important area of Forest Land and would also conflict with Policy 83B.	impacts are relevant to the SA of LP2.	
City of London	4.4cii Car-free It seems highly unlikely that any of these developments would remain 100% car-free and, therefore, significant traffic increases could be expected along roads through the Forest, such as along Rangers Road and the A104 out to the M25 Junction 26 and along Whitehall Road to the east and Daws Hill to the north. This seems likely to screen in as a likely significant effect which has not yet been screened in by the HRA. No specific Mitigation measures are set out in the Plan (see comments on the HRA above).	The air quality mitigation strategy models those mitigation measures which can be modelled in order to understand the how effective they will be in avoiding air pollution and effects on the EFSAC.	Y

Appendix 4 – Air Quality Assessment

Kairus Ltd

Air Quality Modelling

To support
Waltham Forest Local Plan
Habitats Regulations Assessment

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Author	SCH
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1 Introduction

1.1 Introduction

Kairus Ltd was commissioned by London Borough of Waltham Forest (LBWF) to undertake an air quality assessment to assess the potential air quality impacts on the Epping Forest Special Area of Conservation (SAC) associated with the emerging LBWF Local Plan. The assessment is intended to assist LBWF in meeting its Habitats Regulations duty.

The assessment considers the potential for adverse impacts on the SAC that may occur as a result of the increase in traffic on roads within the borough, due to the development outlined in the emerging Local Plan.

Epping Forest has been designated as a Special Area of Conservation (SAC) because the area is an example of a large ancient woodland pasture with habitats of high nature conservation value including ancient semi-natural beech woodland, old grassland plains, wet and dry heathland and scattered wetland habitats. The site hosts three Annex 1 habitats, together with the Stag Beetle, a species listed on Annex II[1].

Exhaust emissions from vehicles are capable of adversely affecting the protected habitats and the key pollutants of concern are oxides of nitrogen (NO_x), ammonia (NH_3) concentrations and nutrient – nitrogen deposition.

Predicted ground level concentrations of the pollutants have been compared against the relevant air quality standards and guidelines (see Section 3.3) for the protection of sensitive ecological habitats.

A glossary of common air quality terminology is provided in Appendix A.

1.2 Background

1.2.1 London Borough of Waltham Forest Local Plan

LBWF are in the process of preparing a new Local Plan which when adopted will set out the Council's planning policy for the next 15 years. It sets out the strategic policies and development management policies for delivering development across the borough. The draft Local Plan Part 1[2] was subject to a public consultation in summer 2019 and the Council subsequently produced a draft Site Allocations Development Plan Document (DPD)[3] that, when adopted, will form Part 2 of the Council's Local Plan. The draft Site Allocations document sets out the sites across the borough where development might happen. The final draft Local Plan and the first draft Site Allocations DPD are currently out for public consultation until Monday 14th December 2020.

The Waltham Forest Local Plan 2020 sets targets to deliver 27,000 additional homes and 52,000m^2 of employment floorspace in Waltham Forest by 2035. The draft Site Allocations DPD sets out the key sites for re-development over three areas: South Waltham Forest, Central Waltham Forest and North Waltham Forest.

1 https://sac.jncc.gov.uk/site/UK0012720

2 London Borough of Waltham Forest (2020) Shaping the Borough Waltham Forest Local Plan (LP1) 2020-2035, October 2020

3 London Borough of Waltham Forest (2020) Shaping the Borough Waltham Forest Local Plan (LP2) Draft Site Allocations Document (Regulation 18), September 2020

1.2.2 Impacts of NO_x and NH_3 on Plants[4]

Oxides of Nitrogen (NO_x)

NO_x, produced as a result of combustion processes can affect plants directly or indirectly. It may enter a plant via the stomata (as NO or NO_2), where it has phototoxic effects. Lower plants such as lichens and bryophytes are particularly vulnerable to direct exposure to the gases in this way. NO_x can also deposit onto soil and, following transformation to nitrate, enrich the soil leading to eutrophication.

Ammonia (NH_3)

NH_3 emissions can be emitted from road vehicles equipped with catalyst devices to control NO_x emissions. Ammonia is an unintended by-product of the NO_x reduction process on the catalyst and was more pronounced for early generation petrol cars with catalysts (Euro 1 and 2). Heavy duty vehicles may also emit small amounts of NH_3 due to ammonia slip from the Selective Catalytic Reduction (SCR) system. Plants directly take up NH_3 through their stomata and this increases the amount of nitrogen within the plant. In addition, its alkalinity adversely affects plant biochemistry.

NH_3 also reacts in the atmosphere to produce ammonium ions which contribute to nutrient nitrogen and acid deposition. Higher plants are less sensitive to this than lower plants (lichens and bryophytes).

It is important to note that the main source of NH_3 in the UK is from livestock and other agricultural emissions and that transport related emissions make up a very small fraction of overall NH_3 emissions.

4 Holman et al (2020). A guide to the assessment of air quality impacts on designated nature conservation sites – version 1.1 Institute of Air Quality Management, Appendix D

2 Site Description

2.1 Epping Forest SAC

Epping Forest was a former royal forest and is London's largest open space. It covers an area of approximately 2.4 ha and is framed by Walthamstow to the south, the Lea Valley to the west, the M11 to the east and the M25 to the north. The majority of the Forest is designated as a Site of Special Scientific Interest (SSSI) and a Special Area of Conservation (SAC).

A significant proportion of the SAC lies within the administrative area of Epping Forest District Council. The remainder lies within the London Boroughs of Waltham Forest and Redbridge. Epping Forest SAC forms the eastern and northern fringe of the Waltham Forest borough. Figure 2.1 shows the location of the Epping Forest SAC.

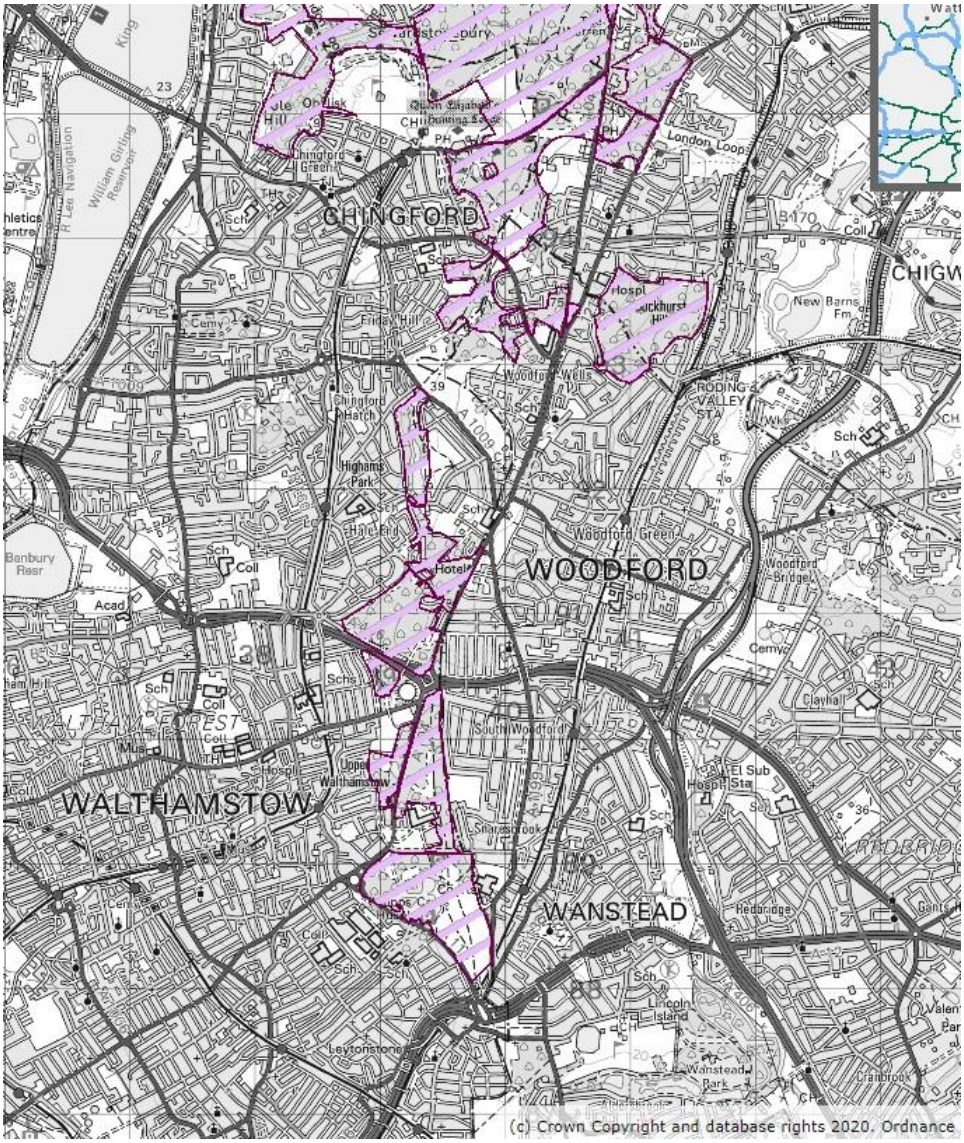


FIGURE 2.1: EPPING FOREST SAC[5]

5 https://magic.defra.gov.uk/MagicMap.aspx

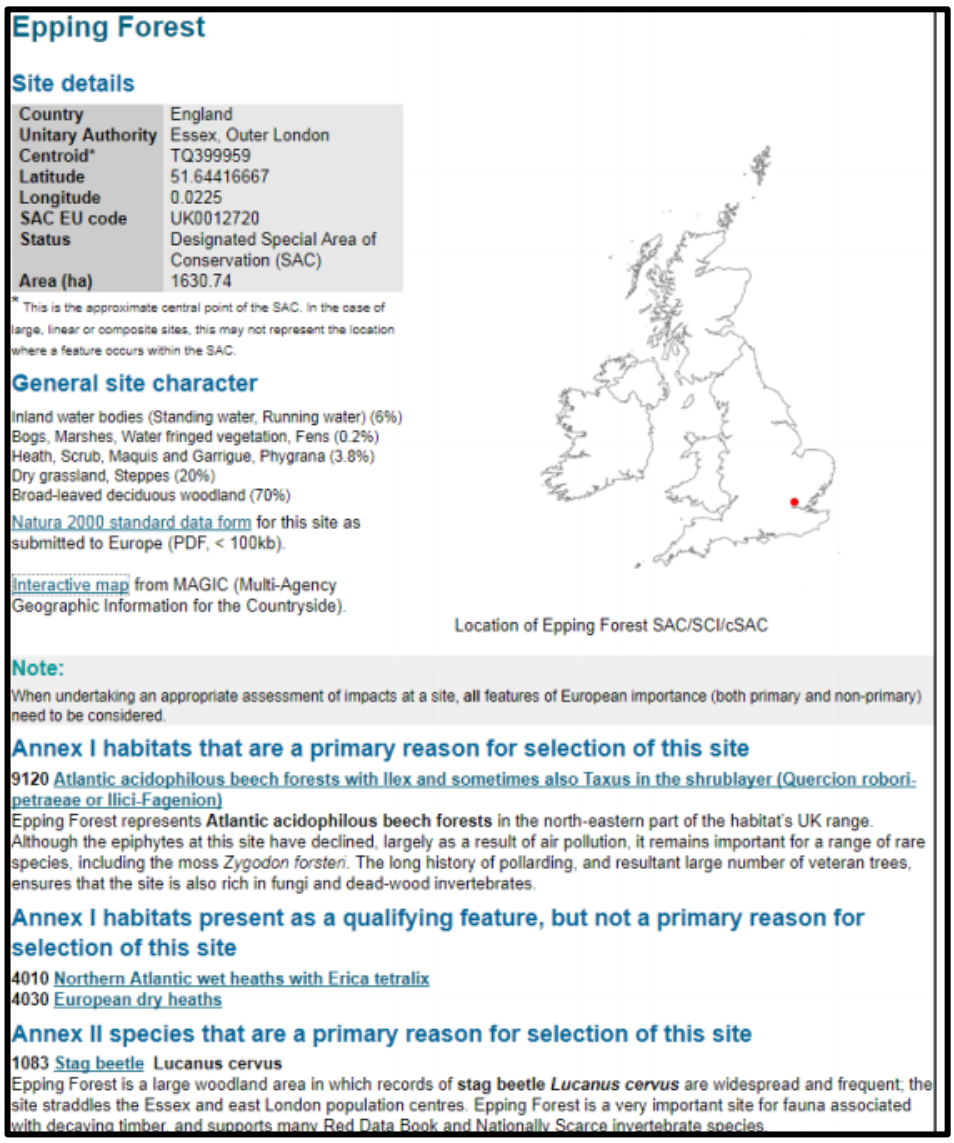
2.2 Qualifying Features of Epping Forest SAC

SACs are within the top tier of nature conservation sites within the UK. The site contains the following Annex 1 habitats:

- Atlantic acidophilous beech forest with Ilex and sometimes Taxus in the shrublayer (*Quercion robori petraeae* or *Ilici-Fagenion*);
- Northern Atlantic wet heaths with *Ericas tetralix*; and
- European dry heaths.

The site also contains Annex II species Stag Beetle *Lucanus cervus*.

The qualifying features of Epping Forest SAC are shown in Figure 2.2.



Epping Forest

Site details

Country	England
Unitary Authority	Essex, Outer London
Centroid*	TQ399959
Latitude	51.64416667
Longitude	0.0225
SAC EU code	UK0012720
Status	Designated Special Area of Conservation (SAC)
Area (ha)	1630.74

* This is the approximate central point of the SAC. In the case of large, linear or composite sites, this may not represent the location where a feature occurs within the SAC.

General site character

Inland water bodies (Standing water, Running water) (6%)
Bogs, Marshes, Water fringed vegetation, Fens (0.2%)
Heath, Scrub, Maquis and Garrigue, Phygrana (3.8%)
Dry grassland, Steppes (20%)
Broad-leaved deciduous woodland (70%)

Natura 2000 standard data form for this site as submitted to Europe (PDF, < 100kb).

Interactive map from MAGIC (Multi-Agency Geographic Information for the Countryside).

Location of Epping Forest SAC/SCI/cSAC

Note:

When undertaking an appropriate assessment of impacts at a site, **all** features of European importance (both primary and non-primary) need to be considered.

Annex I habitats that are a primary reason for selection of this site

9120 Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)
Epping Forest represents **Atlantic acidophilous beech forests** in the north-eastern part of the habitat's UK range. Although the epiphytes at this site have declined, largely as a result of air pollution, it remains important for a range of rare species, including the moss *Zygodon forsteri*. The long history of pollarding, and resultant large number of veteran trees, ensures that the site is also rich in fungi and dead-wood invertebrates.

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site

4010 Northern Atlantic wet heaths with Erica tetralix
4030 European dry heaths

Annex II species that are a primary reason for selection of this site

1083 Stag beetle **Lucanus cervus**
Epping Forest is a large woodland area in which records of **stag beetle *Lucanus cervus*** are widespread and frequent; the site straddles the Essex and east London population centres. Epping Forest is a very important site for fauna associated with decaying timber, and supports many Red Data Book and Nationally Scarce invertebrate species.

FIGURE 2.2: QUALIFYING FEATURES OF THE EPPING FOREST SAC (JNCC)[6]

6 https://sac.jncc.gov.uk/site/UK0012720

3 Relevant Legislation, Policies and Guidance

3.1 Legislation and Policy

3.1.1 EU 'Habitats Directive'

The EU Directive 92/43/EEC[7] on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive), was adopted in May 1992, and aims to promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements. It requires all member states to introduce a range of measures for the protection of habitats and species. The Conservation of Habitats and Species Regulations 2010[8] transpose the Habitats Directive into legislation in the UK and Wales.

3.1.2 The Conservation of Habitats and Species Regulations 2017

The Conservation of Habitats and Species Regulations was adopted in November 2017, consolidating the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. They require the Secretary of State to provide the European Commission (EC) with a list of sites which are important for the habitats or species listed in the Directive. The EC then designates worthy sites as Special Areas of Conservation (SACs). The Regulations also require the compilation and maintenance of a register of European sites, to include SACs and Special Protection Areas (SPAs) and these sites form a network termed 'Natura 2000'.

The Habitats Regulations also require the planning authority to evaluate whether a development is likely to give rise to a significant effect on the European site. Where this is the case, the planning authority is required to carry out an appropriate assessment, to show that there will be no adverse effects on the integrity of the site before planning consent will be granted.

The conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019[9] were made on 14 March 2019. The Regulations ensure that the habitat and species protection and standards derived from EU law will continue to apply after Brexit. Amendments to the Habitats Regulations are largely limited to 'operability changes' that will ensure the regulations can continue to have the same working effect as now after the transition period.

3.1.3 Critical Levels and Loads for Designated Ecological Sites

Critical levels and critical loads are used for assessing the risk of air pollution impacts on ecosystems. Critical levels are defined by the United Nations Economic Commission for Europe (UNECE) as *'concentrations of pollutants in the atmosphere above which direct adverse effects on receptors, such as human beings, plants, ecosystems or materials, may occur according to present knowledge'.* The critical levels relevant to this assessment are set out in Table 3.1.

The critical levels for NO_x are set in the European Union (EU) Ambient Air Quality Directive[10] and transposed into law by the Air Quality standards regulations 2010[11], as amended.

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7 Directive 92/43/EEC of the European Parliament and of the Council of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora 1992

8 The Conservation of Habitats and Species Regulations 2017 – Statutory Instrument 2017 No. 1012

9 The Conservation of Habitats and Species (amendment) (EU Exit) Regulations 2019 – Statutory Instrument 2019 NO.579

10 Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe

11 Air Quality Regulations 2010 – Statutory Instrument 2010 No. 1001

Table 3.1: Critical Levels for Ecological Receptors		
Pollutant	**Averaging Period**	**Concentration (µg/m^3)**
Oxides of Nitrogen (NO_x)	Annual Mean	30
Ammonia (NH_3)	Annual Mean	3
	Annual Mean	1 (for lichens and bryophytes)

Critical loads (CLOs) relate to the potential effects of pollutant deposition (over periods of decades) and are defined by UNECE as *'a quantitative estimate of exposure to one or more pollutants below which significant harmful effects on specified sensitive elements of the environment do not occur according to present knowledge'* .

Empirical CLOs for nutrient nitrogen are set under the Convention on Long-Range Transboundary Air Pollution. They are based on empirical evidence such as observations from experiments and gradient studies. CLOs are assigned to habitat classes defined within the European Nature Information System (EUNIS)[12] which enables consistency of habitat terminology and understanding. CLOs are given as ranges and reflect the variation in ecosystem response across Europe.

CLOs for use in impacts assessments, which were revised in June 2010, are provided on the Air Pollution Information System (APIS)[13]. The impact of growth planned within Waltham Forest within the Local Plan on nutrient nitrogen and acid (from nitrogen) deposition has been assessed at relevant identified sensitive ecological receptors against the CLO's set out on the APIS website. The CLOs of relevance to the habitats within the Epping Forest SAC are set out in Tables 3.2 and 3.3.

Table 3.2: Critical Loads for Nutrient Deposition	
Habitat	**Critical Load (kg N/ha/yr)**
Atlantic Acidophilous Beach Forest with *Ilex*	10-20
North Atlantic Wet Heaths with *Erica Tetralix*	10-20
European Dry Heaths	10-20

Table 3.3: Critical Loads for Acidification	
Habitat	**Critical Load (keq N/ha/yr)**
Atlantic Acidophilous Beach Forest with *Ilex*	CLMinN 0.142 CLMaxN 1.73
North Atlantic Wet Heaths with *Erica Tetralix*	CLMinN 0.714 CLMaxN 1.59
European Dry Heaths	CLMinN 0.714 CLMaxN 1.59

12 http://eunis.eea.europa.eu/index.jsp

13 www.apis.ac.uk

3.2 Planning Policy

3.2.1 National Planning Policy

Published on 27th March 2012, the National Planning Policy Framework (NPPF)[14] sets out the Government's planning policies for England and how these are expected to be applied. It replaces Planning Policy Statement 23: Planning and Pollution Control[15] which provided planning guidance for local authorities with regards to air quality.

At the heart of the NPPF is a presumption in favour of sustainable development. It requires Local Plans to be consistent with the principles and policies set out in the Framework with the objective of contributing to the achievement of sustainable development.

Current planning law requires that applications for planning permission must be determined in accordance with the relevant development plan (i.e. Local Plan or Neighbourhood Plan). The NPPF should be taken into account in the preparation of development plans and therefore the policies set out within the Framework are a material consideration in planning decisions.

The NPPF identifies 12 core planning principles that should underpin both plan-making and decision-taking, including a requirement for planning to 'contribute to conserving and enhancing the natural environment and reducing pollution'.

Under Policy 11: Conserving and Enhancing the Natural Environment the Framework requires the planning system to 'prevent both new and existing developments from contributing to or being put at unacceptable risk or being adversely affected by unacceptable levels of air pollution'.

In dealing specifically with the impact of development on sensitive ecological sites, paragraph 177 states that '*the presumption in favour of sustainable development does not apply where the plan or project is likely to have significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.'*

3.3 Guidance

3.3.1 Design manual for Roads and Bridges (DMRB)

Section 3, Volume 11 of the DMRB[16] provides guidance on the assessment of the impact that road projects may have on local and regional air quality including internationally designated nature conservation sites. It states that nature conservation sites (SPAs, SACs and Ramsar sites) within 200 m of an affected road, classed as a road where there is expected to be an increase of >1000 daily vehicle movements or an increase of >200 daily heavy duty vehicle (HDV) movements, need to be considered within an assessment. Beyond 200 m from the roadside, atmospheric concentrations are likely to be similar to background concentrations due to dispersion of traffic emissions.

14 Ministry of Housing, Communities and Local Government: National Planning Policy Framework (July 2018)

15 Office of the Deputy Prime Minister (2004) Planning Policy Statement 23: Planning and Pollution Control

16 Design Manual for Roads and Bridges (2007) Volume 11 Environmental Assessment Section 3 Environmental Assessment Techniques< May 2007

3.3.2 Natural England 'Guidance on the Assessment of Road Traffic Emissions under the Habitats Regulations'

Natural England published guidance in June 2018, on the approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations[17]. The guidance applies to emissions from road traffic likely to be generated by new development projects including residential, mixed use and industrial/commercial developments; emissions from road traffic likely to result from allocations in strategic Local Plans and emissions from proposed road schemes.

The document provides advice on screening and for road traffic emissions the distance criteria applied is 200m. Further advice is provided on the appropriate assessment and whether detailed modelling may be required.

3.3.3 IAQM 'A Guide to the Assessment of Air Quality impacts on Designated Nature Conservation Sites'

The Institute of Air Quality Management (IAQM) has published guidance on the assessment of the air quality impacts of development on designated nature conservation sites[18] . The guidance discusses the policy and legal background underpinning the proposed methodology, including the impact of the Wealdon Judgement[19] (see Section 3.3.5) and the Netherlands Air Quality Judgement20. The document outlines the way in which air quality consultants and ecologists should work together, highlighting the responsibilities for each when carrying out Habitats Regulations Assessment.

3.3.4 IAQM Position Statement

In January 2016, the IAQM, issued a position statement on the use of a criterion for the determination of an insignificant effect of air quality impacts on sensitive habitats[21] . The IAQM stated '*that the use of a criterion of 1% of an assessment level in the context of habitats should be used only to screen out impacts that will have an insignificant effect. It should not be used as a threshold above which damage is implied and is therefore used to conclude that a significant effect is likely.*'

3.3.5 The Wealdon Judgement

The Wealdon judgement confirmed that when assessing the capacity for development to contribute to air pollution impacts on Natura 2000 sites, this should include assessment of other plans and projects in combination.

17 Natural England (2018) Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations V1.4, June 2018

18 Holman et al (2020). A guide to the assessment of air quality impacts on designated nature conservation sites – version 1.1 Institute of Air Quality Management

19 Judgement in Wealen District Council v Secretary of State for Communities and Local Government, Lewes District Council and South Downs National Park Authority (2017) EWHC 351 (Admin)

20 Judgement of the Court (Second Chamber, Cooperatie Mobilisation for the Environment UA and Vereniging Leefmilieu v College van gedeputeerde staten van Limburg and College van gedeputeerde staten van Gelderland. Requests for a preliminary ruling from the Raad van State Joined Cases C-293/17 and C-294/17, 7 November 2018

21 IAQM (2016) Position Statement 'Use of a Criterion for the Determination of an Insignificant Effect of Air Quality Impacts on Sensitive Habitats, January 2016

4 Assessment Approach

4.1.1 Introduction

Potential impacts on air quality due to local traffic emissions have been predicted using the ADMS dispersion model (version 5.0, released March 2020). This is a commercially available dispersion model and has been widely validated for this type of assessment and used extensively in the Air Quality Review and Assessment process.

The model uses detailed information regarding traffic flows on the local road network and local meteorological conditions to predict pollution concentrations at specific locations selected by the user. Meteorological data from the London City Airport Meteorological Station for 2019 has been used for the assessment.

Quantitative assessment of the impacts on local air quality from road traffic emissions associated with the growth planned within the draft Local Plan have been completed against the relevant Critical Levels and Critical Loads as set out in tales 3.1 to 3.3.

4.1.2 Emissions Data

The model has been used to predict road specific concentrations of oxides of nitrogen (NOx) and Ammonia (NH_3) at selected receptors located within the Epping Forest SAC.

Oxides of Nitrogen

The NO_x emission factors released by Defra in August 2020, provided in the Defra emissions factor toolkit (EFT) EFT2020_v10[22], have been used to predict traffic related emissions of NO_x.

Emission factors and background data used in the prediction of future air quality concentrations predict a gradual decline in pollution levels over time due to improved emissions from new vehicles and the gradual renewal of the vehicle fleet. In recent years the Defra emission factors published within the EFT have been found to predict lower NO_x concentrations in future years compared to concentrations measures at roadside locations across the UK. However, research carried out by Air Quality Consultants Ltd (AQC) has now shown that emissions of NO_x from vehicles within the recently released EFT are now matching concentrations recorded at roadside locations between 2013 to 2019. The AQC report[23] concludes that '*the EFT is now unlikely to over-state the rate at which NOx emissions decline into the future at an 'average' site in the UK. Indeed, the balance of evidence suggests that, on average, NOx concentrations are likely to decline more quickly in the future than predicted by the EFT'.* This has removed the need for the use of any sensitivity tests for future year scenarios.

In light of the above the relevant future year EFT emissions data has been used to predict concentrations in the assessment years 2021, 2031 and 2041.

It should be noted that current emissions data is only provided up to 2030, therefore concentrations in 2031 and 2041 have been predicted using 2030 emissions data. This is therefore considered to represent a cautious prediction of NO_x concentrations in these two future assessment years.

22 https://laqm.defra.gov.uk/review-and-assessment/tools/emissions-factors-toolkit.html

23 https://www.aqconsultants.co.uk/news/march-2020/defra%E2%80%99s-emission-factor-toolkit-now-matching-measu

Full details of the information used to calculate the emissions data within EFT v10.1 is set out within the EFT v10.1 user guide[24]. However, in brief the user guide confirms the following:

'within London, the default fleet split assumptions and euro class compositions are based on bespoke vehicle fleet information and projections for London provided by TRL in early 2018. These data sets are inclusive of the impact from 2019 onwards of the Ultra-Low Emissions Zone (ULEZ) in central London, the TfL bus fleet meeting the ULEZ requirements London-wide in 2020 and all new taxis registered from 2018 onwards being zero emission capable. They do not include the impact of the full ULEZ expansion to the North and South Circular Roads in 2021, nor the tightening of the Low Emission Zone (LEZ) standards for heavier vehicles in 2021'.

As detailed on the Defra UK-Air website it should also be noted that '*the default fleet projections in EFT v10.1 are based on fleet growth assumptions which were current before the Covid-19 outbreak in the UK. In consequence, default fleet outputs from the tool do not reflect short or longer term impacts on emissions in 2020 and beyond resulting from behavioral change during the national or local lockdowns'*.

Ammonia

Emission rates of NH_3 are not included in the EFT.

NH_3 emissions are produced by the control systems that are designed to reduce NO_x emissions from road vehicles. AQC published a report discussing emissions of NH_3 from road vehicles and the potential impact on nitrogen-sensitive habitats[25]. To accompany the report AQC have also published vehicle related ammonia emission factors within the Calculator for Road Emissions of Ammonia (CREAM) workbook[26]. NH_3 emissions for the assessment years 2021, 2031 and 2041 have been obtained from the CREAM workbook. As for NO_x, data is only provided up to 2030, therefore the 2030 data has been used for the 2031 and 2041 assessment years.

It is noted that, unlike vehicle related NO_x emissions, which are predicted to decline in future years, NH_3 vehicle related emissions are expected to remain at least the same, if not increase. NO_x emissions are predicted to decline due to an expected increase in electric cars and petrol-hybrid vehicles which emit less NO_x per vehicle compared to non-hybrid vehicles, however there is currently no evidence to show that hybrid vehicles will emit less ammonia than non-hybrid vehicles, therefore contribution from NH_3 from vehicle emissions is not expected to decline. This would indicate that the contribution of NH_3 to future roadside nitrogen deposition is likely to become more significant as NO_x contribution declines.

4.1.3 Background Concentrations

The ADMS model estimates concentrations arising as a result of vehicle emissions. It is necessary to add an estimate of local background concentrations or deposition rates to obtain the total levels for comparison against the relevant CLs and CLOs.

Background NO_x and NO_2 data for the assessment area has been taken from the 2018-based Defra background maps which provide an estimate of concentrations between 2018 and 2030. Data for 2019, 2021 and 2030 (used for the 2031 and 2041 plan assessment years) have been extracted for the grid squares which represent each of the receptors used in the modeling. No adjustment has been made to the background data using the sectoral removal facility available because the

24 https://laqm.defra.gov.uk/documents/EFTv10.1-user-guide-v1.0.pdf

25 AQC (2020) Ammonia Emissions from Roads for Assessing Impacts on Nitrogen-sensitive Habitats, February 2020

26 https://www.aqconsultants.co.uk/resources 'Calculator for Road Emissions of Ammonia CREAM V1A

modeling carried out for this assessment did not include all the roads within grid squares covering the study area. Therefore, it was not possible to determine what proportion of the road contribution should be removed and what should be left in.

Details of the background data used within the modeling are provided in Appendix E.

Background NH_3 concentrations and deposition rates for Nutrient nitrogen and acidity have been extracted from the APIS website for the relevant OS grid reference representative of each receptor as detailed in section 4.1.7. The background data used is provided in Appendix E.

4.1.4 Traffic Data

Traffic data for the assessment has been provided by Awcock Ward Partnership (AWP).

Traffic models where provided to AWP from TfL from the London Highway Assignment Model (LoHAM), a strategic model representing routing and congestion of motorized highway trips using London's highway network. The data includes all committed schemes within London and is therefore considered to provide an assessment of in-combination effects. The data takes account of impacts from other local authority development plans.

The model data has been calibrated to a base of November 2016 with forecast case models provided for 2021, 2026, 2031 and 2041 with the data provided as AM peak, interpeak and PM peak flows. The process applied by AWP to provide the relevant data for use in this assessment is set out in the AWP Technical Note *'LBWF HRA Air Quality Assessment, traffic Data Derivation'* included in Appendix B[27].

AWP subsequently factored the 2016 base data forward to 2019 to provide base scenario data for 2019 to allow model verification against the latest available monitoring data.

Data was also provided for the future forecast years of 2021, 2031 and 2041.

The data was initially reviewed to identify those road links affected by the LBWF draft Local Plan located within 200 m of the Epping Forest SAC. Those links where then further reviewed against the DMRB screening criteria, identifying those links where the draft Local Plan would result in an increase in trips of more than 1000 vehicles per day or an increase in HDV of more than 200 per day.

The road links identified as 'affected roads' and therefore included within the modeling assessment are set out below and in Appendix B.

- A104 Epping New Road
- A110 Whitehall Rd/Kings Head Hill
- A112 Sewardstone Rd/Chingford Mount/Hoe St
- A12 EB & WB
- A121 Honey Lane
- A121 Loughton Town Centre back towards A104
- A406 North Circular Rd EB & WB
- A503 Forest Rd
- Crossroads, High Beech and Avey Lane to Sewardstone Rd (A112)
- Pynrest Green Rd to Claypit Hill

27 AWP, LBWF HRA Air Quality Assessment, Traffic Data Derivation – Technical Note, Project 1102, 6th October 2020

4.1.5 Noise Barriers

Noise barriers are located along sections of the A12 to protect adjacent residents from noise associated with vehicles using the road. Ground-level pollution concentrations tend to be lower downwind of a noise barrier due to the disruption in dispersion. The noise barrier effectively raises the source height. The noise barriers located along the A12 have been included within the ADMS Roads model.

4.1.6 Verification of Model Results

It is recommended that the model results are compared with measured data to determine whether the model results need adjusting to more accurately reflect local air quality. This process is known as verification.

LAQM.TG(16) recommends that model predictions should be within 25% (preferably 10%) of monitored concentrations for the model to be predicting with any degree of accuracy. Also, the guidance recommends that any adjustment factors applied to model results should be calculated based on verification using monitoring sites in a similar location i.e. roadside, intermediate or background sites.

To verify the model results, the ADMS model has been used to predict NO_x concentrations at LBWF monitoring sites 6 and 12, located adjacent to the A12 and sites 33 and 37, located in the wider urban area of LBWF. The verification process has been used to obtain separate adjustment factors to apply to those receptors in close proximity to the A12 and those within the wider urban area of LBWF and Epping Forest. Further details on the verification and calculation of adjustment factors is provided in Appendix C.

4.1.7 Receptors

The modelling assessment has predicted NO_x and NH_3 emissions from road vehicles at a number of receptors representing the Epping Forest SAC. The receptors have in the first instance been selected at roadside locations, or the nearest point within the SAC to an affected road, to assess worst-case impacts.

The location of these receptors are shown in Appendix D.

Where the assessment has identified that the impact on the relevant nutrient nitrogen and acid deposition rates cannot be classed as 'insignificant' (as discussed in Section 4.1.9), vehicle related emissions of both NO_x and NH_x have also been predicted across a 200 m transect leading from the roadside receptor point up to 200 m away from the road.

Those receptors where a transect has been assessed includes:

- Receptor 1 – A12
- Receptor 2 – A12
- Receptors 84 to 89 – adjacent to Link 14
- Receptors 90 and 91 – adjacent to Link 13
- Receptors 93 to 95 and 97 to 99 – adjacent to Link 12

4.1.8 Processing of Results

NO_x emissions predicted by the model have been adjusted by the relevant adjustment factors (Appendix C) and then converted to NO_2 using the LAQM calculator v8.1 published in August 2020 available on the Defra air quality website[28].

The predicted annual mean NO_2 and NH_3 concentrations at each receptor have been compared against the CL's set out in Table 3.1.

The IAQM guidance on assessing air quality impacts on designated nature conservation sites sets out conversion factors for calculating nitrogen deposition (N-deposition) and acidity rates based on calculated NO_2 and NH_3 concentrations.

To calculate nutrient nitrogen deposition the NO_2 and NH_3 concentrations are multiplied by the relevant deposition velocities and then the relevant conversion factor was applied to calculate the speciated dry deposition flux. The relevant conversion factors used are set out in Table 4.1.

28 http://uk-air.defra.gov.uk

Table 4.1: Conversion Factors to Determine Dry Deposition Flux for Nutrient Nitrogen Deposition			
Pollutant	**Dry Deposition Velocity (m/s)**		**Conversion Factor (µg/m²/s to kg/ha/yr of pollutant species)**
	Grassland	**Forest**	
NO_2	0.0015	0.003	95.6
NH_3	0.020	0.030	260

To calculate acid deposition the NO_2 and NH_3 concentrations have been converted to kilo-equivalent ion deposition (keq/ha/yr) using the conversion factors set out in Table 4.2.

Table 4.2: Conversion Factors to Determine Dry Deposition Flux for Acid Deposition			
Pollutant	**Dry Deposition Velocity (m/s)**		**Conversion Factor (µg/m²/s to keq/ha/yr of pollutant species)**
	Grassland	**Forest**	
NO_2	0.0015	0.003	6.84
NH_3	0.020	0.030	18.5

The majority of Epping Forest is classed as forest habitat, however there are some areas which are dominated by heath habitat[29]. For those receptors located within the heath habitat the grassland disposition velocity factor has been applied.

The resulting calculated deposition rates for nutrient nitrogen and acidity have been compared with the relevant CLO's as set out in Tables 3.2 and 3.3.

The baseline acid deposition rates, as obtained from the APIS website, are greater than CLminN for the Epping Forest SAC. As recommended on the APIS website, the following formula has therefore been applied to the results to determine the change in acid deposition associated with the draft Local Plan:

'*where the total acid disposition is greater than CLminN, the combined inputs of sulphur and nitrogen need to be considered. In such cases, the total acidity input should be calculated as a proportion of CLmaxN as follows:*

*Change as proportion of critical load function = ((change of S+N deposition)/CLmaxN)*100*'

4.1.9 Significance of Impacts

The approach set out within the IAQM guidance on assessing air quality impacts on designated nature conservation sites has been used to screen whether the predicted impact (or process contribution – PC) will have an insignificant effect.

29 Natural England website: https://designatedsites.naturalengland.org.uk/sitegeneraldetail.aspx?SiteCode=UK0012720&SiteName=Epping%20Forest%20SAC&countyCode=&responsiblePerson=&unitId=&SeaArea=&IFCAArea=

The guidance recommends the use of a 1% screening criteria i.e. where the PC is 1% or less of the relevant long term CL or CLO the impact is considered to equate to a very small change and can therefore be classed as insignificant.

However, as discussed within the IAQM guidance, it should be noted that the 1% screening criterion is not a *'threshold of harm and exceeding this threshold does not, of itself' imply damage to a habitat'*.

The guidance goes on to recommend that where '*the impact is sufficiently large that it cannot be screened out and therefore it could have a potential significant effect, the information should be passed to the ecologist to use their expertise to determine whether or not there is a likely significant effect of the project or plan'*.

This assessment has considered the PC at each receptor and determined whether the impact can be screened as insignificant. Where this is not possible the data has been passed to the project ecologist for further consideration.

5 Baseline Air Quality Assessment

5.1 Air Quality Monitoring within the Borough

5.1.1 Nitrogen Dioxide

LBWF currently operate three automatic monitoring sites within the borough, which form part of the Air Quality England Network operated by Ricardo Energy & Environment. NO_2 concentrations are also monitored throughout the borough using diffusion tubes. Diffusion tubes are acknowledged as a less accurate method of monitoring ambient air pollutants than automatic monitors, with diffusion tubes over or under estimating concentrations by as much as 30 %. To allow the results to be reliably compared with the AQ Objectives, the data should be bias corrected using data collected from tubes co-located with continuous monitoring sites. The data provided below has been adjusted by LBWF using nationally derived adjustment factors.

Data recorded at the diffusion tube sites used in model verification are presented in Table 5.1.

Table 5.1: Diffusion Tube Annual Average Nitrogen Dioxide Concentrations (µgm^{-3})

Site ID	Site Type	OS Grid Reference	Year				
			2015	2016	2017	2018	2019
6 - Connaught Hall	Roadside	539024, 186945	33.6	42.8	33.5	37.0	32.8
12 - Kings Rd & Kingswood Rd	Roadside	539259, 187567	-	38.5	36.9	32.0	32.9
33 - Station Rd junction with Buxton Rd	Kerbside	538954, 194512	-	-	-	50.3	33.1
37 – Forest Road jnct Wood St	Roadside	538295, 189964	-	-	-	27.3	40.8

The data indicates a downward trend in concentrations. A more detailed review of monitoring carried out across the borough, as set out in the latest Annual Status Report[30] shows an overall decline in NO_2 concentrations across the district, as indicated in Figure 5.1.

30 LBWF (2020) Air Quality Annual Status Report for 2019, 28th may 2020

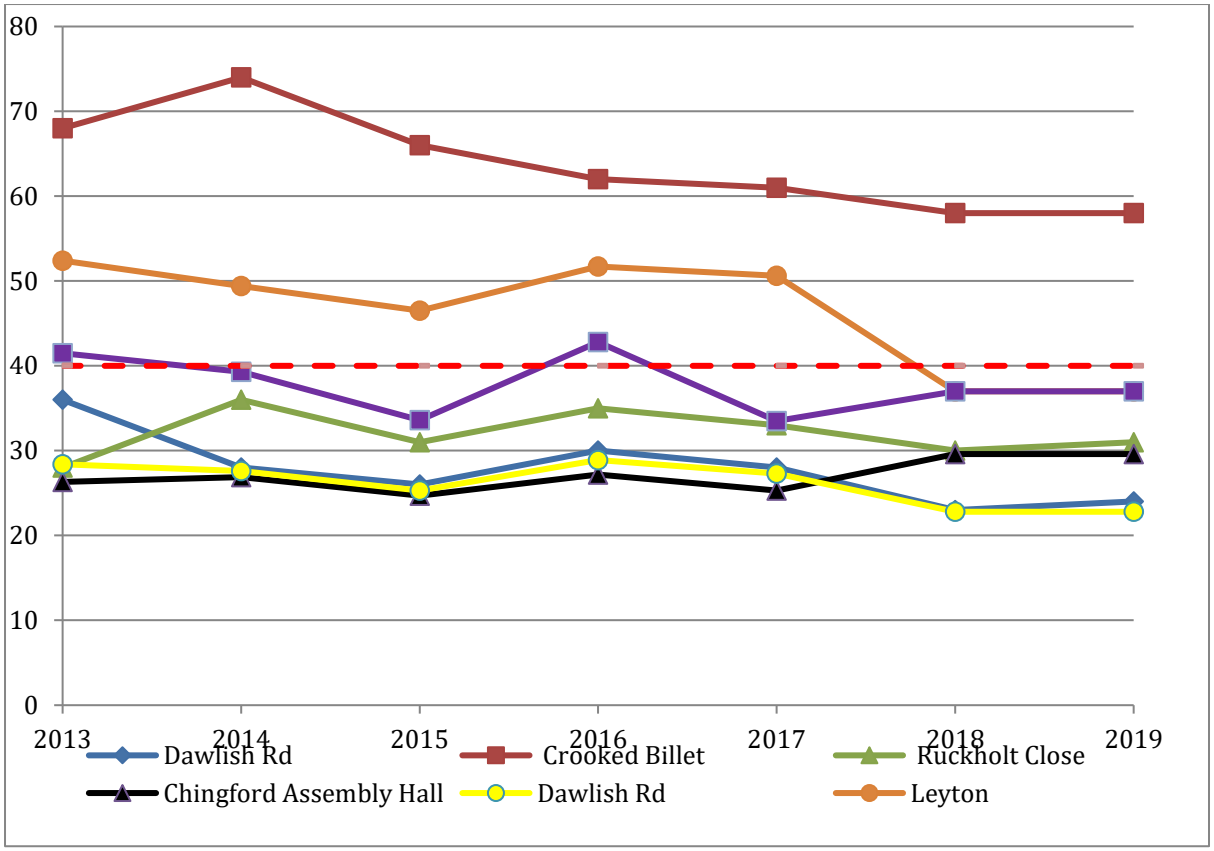


FIGURE 5.1: SUMMARY OF NO_2 MONITORING BETWEEN 2013 AND 2019[30]

Additional information on estimated NO_2 background pollutant concentrations has been obtained from the Defra background maps provided on UK-AIR, the Air Quality Information Resource[31]. These maps are available in 1 km x 1 km grid squares and provide an estimate of concentrations between 2018 and 2030.

Estimated concentrations have been extracted from each grid square representing each receptor for the 2019, 2021 and 2030 and are set out in Table E1, Appendix E.

5.2 Background Concentrations Oxides of Nitrogen

5.2.1 Oxides of Nitrogen

Background concentrations of NO_x at the identified receptors have also been taken from the Defra website and are set out in Table E1, Appendix E.

The data shows NO_x concentrations above the CL of 30 µg/m^3 at a number of locations within the Epping Forest SAC during 2019 and 2021, however by 2031 and 2041 (based on 2030 background data) concentrations are estimated to be below 30 µg/m^3 at all locations within the Epping Forest SAC being considered within this assessment.

5.2.2 Ammonia

Background NH_3 concentrations across the study area have been obtained from the APIS website. The data for each OS grid square considered within the assessment is provided in Table E2, Appendix E.

31 http://uk-air.defra.gov.uk

The data shows that NH_3 concentrations are currently exceeding the 1 µg/m^3 CL (Table 3.1) at all locations within the Epping Forest SAC being considered within this assessment.

5.2.3 Nutrient –Nitrogen

Background nutrient-nitrogen deposition fluxes across Epping Forest have been taken from the APIS website. These are based on a three-year average, in this case 2016-2018. The data for each OS grid square considered within the assessment is provided in Table E2, Appendix E.

The data shows that nutrient nitrogen deposition rates are currently exceeding the upper limit CLO of 20 kg/ha/yr at some locations within the Epping Forest SAC being considered within the assessment. However, the lower CLO of 10 kg/ha/yr is being exceeded at all locations being assessed within the model.

5.2.4 Acid Deposition

Background acid deposition fluxes across Epping Forest have been taken from the APIS website. These are also based on a three-year average, in this case 2016-2018. The data for each OS grid square considered within the assessment is provided in Table E2, Appendix E.

The data shows that acid disposition is are currently exceeding the CLminN CLOs at all receptor locations. An assessment of the combined background nitrogen and sulphur acid deposition rates also shows that the CLMaxN CLO is also be exceeded at a number of receptor locations within the SAC.

6 Impact Assessment

6.1 Airborne NOx

A summary of predicted ground level concentrations of NO_x at the selected receptor locations is provided in Table F1, Appendix F.

The data shows an exceedance of the NO_x CL at a number of receptor locations under the 2019 base scenario. The CL is also exceeded at a number of receptors in the 2021, 2031 and 2041 assessment years, although overall concentrations are predicted to decline and therefore concentrations are lower in the future assessment years compared to the 2019 base year.

The predicted NO_x PC is less than 1% of the annual mean CL of 30 µg/m^3 at all receptor locations under all three future assessment years. As discussed previously in Section 4.1.2, NO_x vehicle related emissions and background concentrations are predicted to decline in future years due to improved emissions from new vehicles and the gradual renewal of the vehicle fleet. The assessment is therefore indicating that the anticipated reduction in vehicle related emissions in the future assessment years outweighs the increase in emissions as a result of the growth in vehicle trips predicted on each of the road links as a result of the Local Plan in the three future assessment years of 2021, 2031 and 2041.

The impact of the Local Plan on the Epping Forest SAC in terms of airborne NO_x can therefore be assessed as insignificant at all receptor locations.

6.2 Airborne NH_3

A summary of predicted ground level concentrations of NH_3 at the selected receptor locations is provided in Table F2, Appendix F.

The data shows NH_3 concentrations above the 1µg/m^3 CL at all receptor locations in the 2019 base year and the three future assessment years.

Unlike NO_x emissions, NH_3 background and vehicle related emissions are not predicted to decline in future years and the assessment has assumed background NH_3 concentrations remain the same in all assessment years.

Under the 2021 assessment year, traffic generated by the Local Plan is predicted to increase NH_3 concentrations at all receptor locations. At the majority of locations, the PC is predicted to be less than 1% of the CL and therefore can be classed as insignificant at these locations. However, at the following locations the PC is predicted to exceed 1% of the CL and therefore the impact cannot be considered as insignificant and further consideration of the impact is required by the project ecologist to determine whether the impact is significant:

- Receptor 1 – adjacent to Links 8 & 15 – A12;
- Receptors 17 to 21 – adjacent to links 5 & 7 – A406
- Receptors 35 to 38 and 41 to 43 – adjacent to link 3 – Whitehall Road
- Receptors 82 to 89 – adjacent to link 14 – A121
- Receptors 90 and 91 – adjacent to link 13 – Pynest Green Lane

Under the future 2031 and 2041 assessment years the increase in NH_3 exceeds 1% of the CL at all receptor locations. The receptors where the impact can not be classed as insignificant is therefore shown in Appendix D, i.e. all the receptors considered within the assessment.

Further assessment of the impacts on NH_3 have been undertaken by predicting NH_3 concentrations at 20 m intervals across a number of 200 m transects. The results of this assessment are set out in Table F3, Appendix F.

The data shows that at a number of locations within the 2021 assessment year the impact exceeds 1% of the CL beyond the first 20 m of the transect, extending up to 160 m from the roadside in some locations.

In the 2031 and 2041 assessment years the impact is more significant with the increase exceeding the 1% CL across the whole 200 m at the majority of the 200 m transects assessed.

The impact of the Local Plan in terms of airborne NH_3 cannot therefore be assessed as insignificant within the Epping Forest SAC and further consideration of the impacts is required by the project ecologist.

6.3 Nutrient Nitrogen Deposition

A summary of predicted ground level nutrient nitrogen deposition rates at the selected receptor locations is provided in Table F4 and F5, Appendix F.

The data shows Nutrient Nitrogen Deposition rates are exceeding both the lower and higher CLOs at all receptor locations in all the assessment years.

Under the 2021 assessment year, the contribution of nutrient nitrogen from NO_2 emissions is predicted to decline, however the contribution from NH_3 is predicted to increase. The overall impact from traffic generated by the Local Plan would not exceed 1% of the CLO at any receptor location within the 2021 assessment year.

Within the 2031 assessment year nutrient nitrogen deposition would increase by more than 1% of the CLO at receptors 1 and 2, adjacent to the A12 and receptors 90 and 91, adjacent to Pynest Green Lane. But at all other receptors the PC would be less than 1% of the CLO and therefore can be classed as insignificant at these locations.

Under the 2041 assessment scenario the PC would be less than 1% of the CLO at the majority of receptor locations. However, the PC exceeds the 1% criterion at the following receptors and therefore the impact cannot be classed as insignificant at this stage of the assessment:

- Receptors 1 and 2 – adjacent to Links 8 & 15 – A12;
- Receptors 83, 85 to 88 – adjacent to link 14 – A121;
- Receptors 90 and 91 – adjacent to link 13 – Pynest Green Lane;
- Receptors 93, 95 to 99 – adjacent to link 12 – High Beech Loughton.

Further assessment of the impacts on nutrient nitrogen have been undertaken by predicting deposition rates at 20 m intervals across a number of 200 m transects. The results of this assessment are set out in Table F6 and F7, Appendix F.

The data shows that within the 2031 assessment year nutrient nitrogen deposition exceeds the CLO by 1% across the whole 200 m transect at receptors 1 and 2, across the first 40 m at receptors 90 and 91, but does not exceed the 1% criterion at any other receptor.

The impact is higher within the 2041 assessment year with the 1% criterion exceeded across the whole 200 m transect at receptor 90 and up to 80 m at receptor 91. However, the 1% criterion is only exceeded within the first 20m at receptors 83 to 89 and 93 to 94.

Overall, within the 2021 assessment year the reduction in nutrient nitrogen from NO_2 outweighs the increase from NH_3, resulting in the impact of vehicle generated by the Local Plan being classed as

insignificant. However, under the 2031 and 2041 assessment years the contribution from NH_3 is higher compared to the reduction in contribution from NO_2, and at a number of locations the impact cannot be classed as insignificant (Figure 6.1). Further consideration of the impacts is required by the project ecologist to determine whether the overall impact is significant.

FIGURE 6.1: LOCATION OF RECEPTORS WHERE IMPACTS ON NUTRIENT NITROGEN DEPOSITION ARE POTENTIALLY SIGNIFICANT.

6.4 Acid Deposition

A summary of predicted ground level acid deposition rates at the selected receptor locations is provided in Table F8 and F9, Appendix F.

The data shows acid deposition rates are exceeding the CLMaxN at the majority of receptor locations in all the assessment years.

Under the 2021 assessment year, the contribution of nutrient nitrogen from NO_2 emissions is predicted to decline, however the contribution from NH_3 is predicted to increase. The overall impact from traffic generated by the Local Plan would not exceed 1% of the CLO at the majority of locations, however the 1% criterion is exceeded at receptors 1, 90 and 91 in this assessment year.

Within the 2031 assessment year acid disposition would increase by more than 1% of the CLMaxN at receptors 1 and 2, adjacent to the A12 and receptors 90 and 91, adjacent to Pynest Green Lane. But at all other receptors the PC would be less than 1% of the CLO and therefore can be classed as insignificant at these locations.

Under the 2041 assessment scenario the PC would be less than 1% of the CLO at the majority of receptor locations. However, the PC exceeds the 1% criterion at the following receptors and therefore the impact cannot be classed as insignificant at this stage of the assessment:

- Receptors 1 and 2 – adjacent to Links 8 & 15 – A12;
- Receptors 83 to 88 – adjacent to link 14 – A121;
- Receptors 90 and 91 – adjacent to link 13 – Pynest Green Lane;
- Receptors 93 to 99 – adjacent to link 12 – High Beech Loughton;
- Receptors 102 and 102 – adjacent to link 2 – A112.

Further assessment of the impacts on nutrient nitrogen have been undertaken by predicting deposition rates at 20 m intervals across a number of 200 m transects. The results of this assessment are set out in Tables F10 and F11, Appendix F.

The data shows that within the 2031 assessment year nutrient nitrogen deposition exceeds the CLO by 1% across the first 100 m at receptor 1, but at all other locations the impact above the 1% criterion is limited to within the first 20 m.

Under the 2041 assessment year the impact above 1% extends up to 180 m from the roadside at receptor 1, but is limited to the first 40 m at receptor 2. At receptors 90 and 91 the 1% criterion is exceeded within 100m and 60 m of the roadside, respectively. At all other locations the criterion is exceeded within the first 20 m only.

The impact of the Local Plan cannot be classed as insignificant within the Epping Forest SAC and further consideration of the impacts is required by the project ecologist to determine whether the overall impact is significant.

FIGURE 6.2: LOCATION OF RECEPTORS WHERE IMPACTS ON ACID DEPOSITION ARE POTENTIALLY SIGNIFICANT.

7 Mitigation

The assessment of emissions associated with traffic generated by the draft Local Plan has shown that in terms of airborne NH_3, nutrient nitrogen and acid deposition the impacts cannot be classed as insignificant. Given the sensitivity of the habitats found within Epping Forest SAC to nutrient nitrogen it is recommended that an Air Quality Mitigation Strategy (AQMS) is developed and implemented prior to approval of the Local Plan.

It is envisaged that the mitigation strategy could include measures such as:

- Initiatives to support walking, cycling and the use of public transport;
- Initiatives to increase the use and uptake of electric vehicles such as installation of off road and on road, private and public EV charging points;
- Strategic Road Signage Strategy;
- HGV Route Management Strategies;
- Campaigns to raise awareness of air quality issues and the benefits of more sustainable travel;
- Possibilities for green planting to absorb pollutants;
- Consideration of clean air zones;
- Roadside Pollution extraction systems.

8 Summary and Conclusion

Kairus Ltd was commissioned by London Borough of Waltham Forest (LBWF) to undertake an air quality assessment to assess the potential air quality impacts on the Epping Forest Special Area of Conservation (SAC) associated with the emerging LBWF Local Plan. The assessment is intended to assist Waltham Forest Borough Council in meeting its Habitats Regulations duty.

The assessment of emissions associated with traffic generated by the draft Local Plan has shown that in terms of airborne NH_3, nutrient nitrogen and acid deposition the impacts cannot be classed as insignificant. Given the sensitivity of the habitats found within Epping Forest SAC to nutrient nitrogen and acid deposition it is recommended that an AQMS is developed and implemented prior to approval of the Local Plan.

It is envisaged that such a mitigation strategy could include measures such as:

- Initiatives to support walking, cycling and the use of public transport, such as the Enjoy Waltham Forest programme already operating within the borough;
- A strategy that actively encourages car free developments;
- A spatial strategy which focuses denser development on areas with good public transport;
- Initiatives to increase the use and uptake of electric vehicles such as installation of off road and on road, private and public EV charging points;
- Strategic Road Signage Strategy;
- HGV Route Management Strategies;
- Campaigns to raise awareness of air quality issues and the benefits of more sustainable travel;
- Possibilities for green planting to absorb pollutants. A detailed Tree Strategy is already being implemented within the borough;
- Consideration of clean air zones; and
- Roadside Pollution extraction systems.

Consideration will also be given to preparing an air quality strategy in collaboration with neighbouring authorities.

Appendix A – Air Quality Terminology

Term	Definition
Accuracy	A measure of how well a set of data fits the true value.
Air quality objective	Policy target generally expressed as a maximum ambient concentration to be achieved, either without exception or with a permitted number of exceedances within a specific timescale (see also air quality standard).
Air quality standard	The concentrations of pollutants in the atmosphere which can broadly be taken to achieve a certain level of environmental quality. The standards are based on the assessment of the effects of each pollutant on human health including the effects on sensitive sub groups (see also air quality objective).
Ambient air	Outdoor air in the troposphere, excluding workplace air.
Annual mean	The average (mean) of the concentrations measured for each pollutant for one year. Usually this is for a calendar year, but some species are reported for the period April to March, known as a pollution year. This period avoids splitting winter season between 2 years, which is useful for pollutants that have higher concentrations during the winter months.
AQMA	Air Quality Management Area.
DEFRA	Department for Environment, Food and Rural Affairs.
EIA regulations	Environmental Impact Assessment regulations
Exceedance	A period of time where the concentrations of a pollutant is greater than, or equal to, the appropriate air quality standard.
Fugitive emissions	Emissions arising from the passage of vehicles that do not arise from the exhaust system.
IPPC	Integrated Pollution Prevention and Control
LAQM	Local Air Quality Management.
LAPPC	Local Air Pollution Prevention and Control
NH_3	Ammonia
NO	Nitrogen monoxide, a.k.a. nitric oxide.
NO_2	Nitrogen dioxide.
NO_x	Nitrogen oxides.
O_3	Ozone.
Percentile	The percentage of results below a given value.
PM_{10}	Particulate matter with an aerodynamic diameter of less than 10 micrometres.
Ratification (Monitoring)	Involves a critical review of all information relating to a data set, in order to amend or reject the data. When the data have been ratified they represent the final data to be used (see also validation).
µgm^{-3} micrograms per cubic metre	A measure of concentration in terms of mass per unit volume. A concentration of 1ug/m^3 means that one cubic metre of air contains one microgram (millionth of a gram) of pollutant.
UKAS	United Kingdom Accreditation Service.
Uncertainty	A measure, associated with the result of a measurement, which characterizes the range of values within which the true value is expected to lie. Uncertainty is usually expressed as the range within which the true value is expected to lie with a 95% probability, where standard statistical and other procedures have been used to evaluate this figure. Uncertainty is more

Term	Definition
	clearly defined than the closely related parameter 'accuracy', and has replaced it on recent European legislation.
USA	Updating and Screening Assessment.
Validation (modelling)	Refers to the general comparison of modelled results against monitoring data carried out by model developers.
Validation (monitoring)	Screening monitoring data by visual examination to check for spurious and unusual measurements (see also ratification).
Verification (modelling)	Comparison of modelled results versus any local monitoring data at relevant locations.

Appendix B – Traffic Data used in Modelling

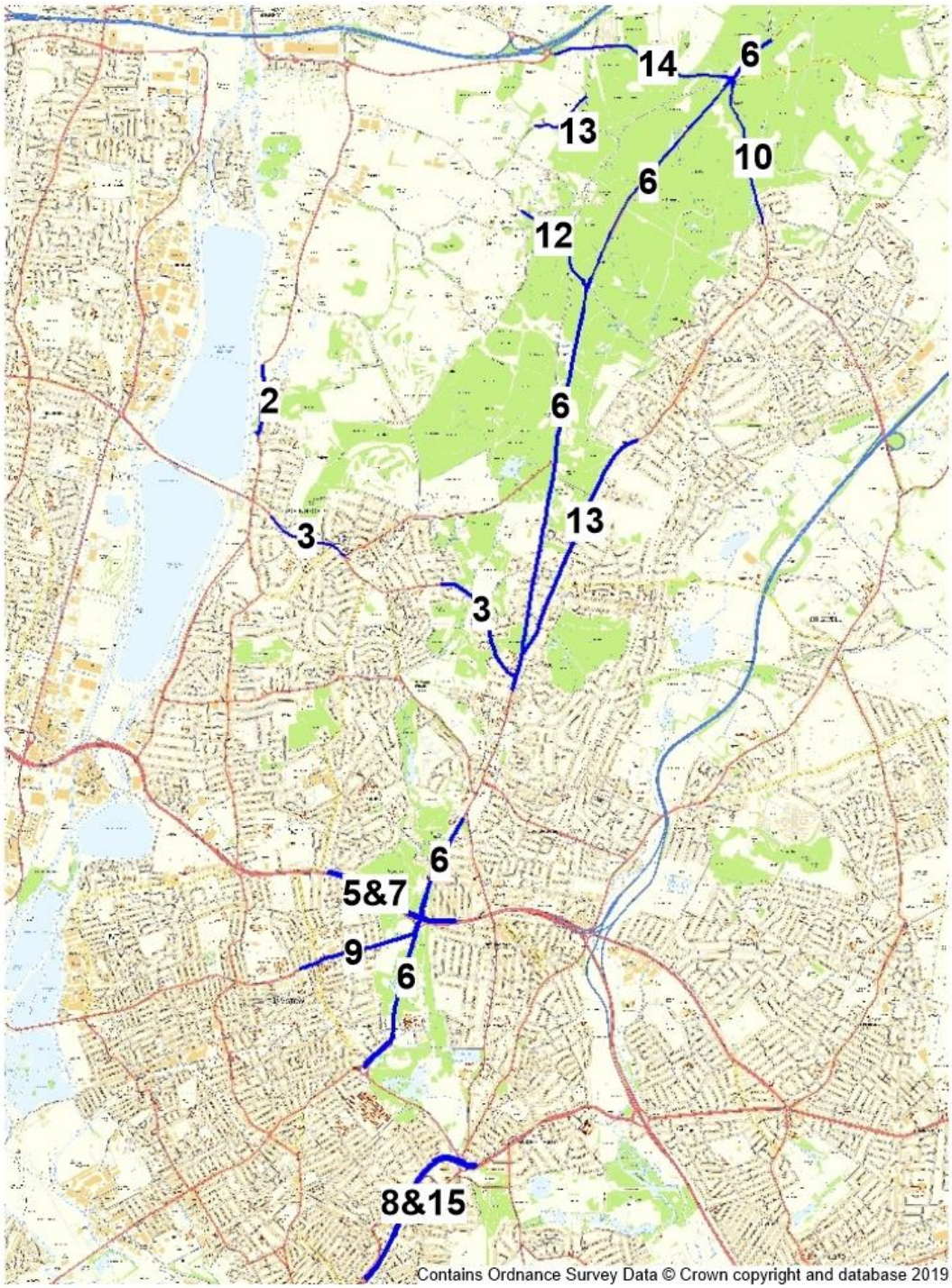
Table B1: Daily Total Traffic Flows used in ADMS Modelling Assessment									
Link Number	**Road link**	**Speed (kph)**	**2019 Base**	**2021 Assessment year**		**2031 Assessment year**		**2041 Assessment year**	
				AADT	**Change due to Local Plan**	**AADT**	**Change due to Local Plan**	**AADT**	**Change due to Local Plan**
6	A104 Epping New Road	56 - between St Thomas Quarters and Buckhurst Hill 48 – through Buckhurst Hill, Woodford Green 35 – Woodford Wells, Gilberts Slade and Upper Walthamstow 24 – at junctions and roundabouts	39585	38,419	-1166	39,655	70	41,676	2091
3	A110 Whitehall Rd/Kings Head Hill	48 – Whitehall Road 35 – Kings Head Hill 24 – roundabouts and junctions	19641	19,819	178	20,738	1097	21,412	1771
2	A112 Sewardstone Rd/Chingford Mount/Hoe St	48	18192	19,072	880	21,866	3674	24,375	6183
8&15	A12 EB & WB	80	91454	94,095	2641	101,684	10230	105,625	14171
14	A121 Honey Lane	35 (24 at junctions and roundabouts)	27883	29,779	1896	32,692	4809	35,476	7593
10	A121 Loughton Town Centre back towards A104	48 – Deer shelter Plain, Bi=Buckhurst Hill 56 – Powell's Forest, Warren Hill 24 – roundabouts and junctions	21595	21,461	134	22,392	797	23,175	1580

Table B1: Daily Total Traffic Flows used in ADMS Modelling Assessment									
Link Number	**Road link**	**Speed (kph)**	**2019 Base**	**2021 Assessment year**		**2031 Assessment year**		**2041 Assessment year**	
				AADT	**Change due to Local Plan**	**AADT**	**Change due to Local Plan**	**AADT**	**Change due to Local Plan**
5&7	A406 North Circular Rd EB & WB	80	120136	120,327	191	123,673	3537	125,657	5623
9	A503 Forest Rd	48 (24 at junctions and roundabouts)	17256	19,151	1895	19,731	2475	20,657	3401
12	Crossroads, High Beech and Avey Lane to Sewardstone Rd (A112)	48 (24 at junctions and roundabouts)	12694	12,686	-8	13,715	1021	15,408	2714
13	Pynrest Green Rd to Claypit Hill	48 (24 at junctions and roundabouts)	1278	1,776	498	24,50	1172	4,360	3082

Table B2: Daily HDV traffic Flows used in ADMS Modelling Assessment									
Link Number	**Road link**	**Speed (kph)**	**2019 Base**	**2021 Assessment year**		**2031 Assessment year**		**2041 Assessment year**	
				HDV	**Change due to Local Plan**	**HDV**	**Change due to Local Plan**	**HDV**	**Change due to Local Plan**
6	A104 Epping New Road	56 - between St Thomas Quarters and Buckhurst Hill 48 – through Buckhurst Hill, Woodford Green 35 – Woodford Wells, Gilberts Slade and Upper Walthamstow 24 – at junctions and roundabouts	1256	1140	-116	1090	-166	1067	-189
3	A110 Whitehall Rd/Kings Head Hill	48 – Whitehall Road 35 – Kings Head Hill 24 – roundabouts and junctions	845	856	10	870	25	846	1
2	A112 Sewardstone Rd/Chingford Mount/Hoe St	48	524	542	17	581	56	683	158
8&15	A12 EB & WB	80	5423	5530	107	5493	68	5491	68
14	A121 Honey Lane	35 (24 at junctions and roundabouts)	1814	1823	9	1735	-79	1609	-205
10	A121 Loughton Town Centre back towards A104	48 – Deer shelter Plain, Bi=Buckhurst Hill 56 – Powell's Forest, Warren Hill 24 – roundabouts and junctions	715	710	-5	684	-31	671	-44

Table B2: Daily HDV traffic Flows used in ADMS Modelling Assessment									
Link Number	**Road link**	**Speed (kph)**	**2019 Base**	**2021 Assessment year**		**2031 Assessment year**		**2041 Assessment year**	
				HDV	**Change due to Local Plan**	**HDV**	**Change due to Local Plan**	**HDV**	**Change due to Local Plan**
5&7	A406 North Circular Rd EB & WB	80	8139	7693	-446	7398	-741	6862	-1277
9	A503 Forest Rd	48 (24 at junctions and roundabouts)	959	1012	52	985	25	963	3
12	Crossroads, High Beech and Avey Lane to Sewardstone Rd (A112)	48 (24 at junctions and roundabouts)	348	342	-7	379	30	423	74
13	Pynrest Green Rd to Claypit Hill	48 (24 at junctions and roundabouts)	136	136	0	172	36	222	86

FIGURE B1: LOCATION OF LINKS USED IN MODEL



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technical note

LBWF HRA Air Quality Assessment

Traffic Data Derivation - Technical Note

Project No.	1102
Revision	
Date	06 October 2020
Client	Clearlead Consulting
Prepared	D Atkin
Checked	I Awcock
Authorised	I Awcock
File Ref.	\\192.168.0.6\Projects\1102 Waltham Forest LP SA HRA Traffic Analysis\C Documents\Reports\1102 LBWF Methodology Note.docx

1 Introduction

1.11 This note sets out the methodology used to derive the annual average daily traffic (AADT) flows required to assess air quality effects of the proposed Waltham Forest Local Plan on the Epping Forest SAC.

1.12 Traffic models for the baseline and future years were provided for AM, PM, and Interpeak periods.

1.13 DfT data points were then used to growth the combined peaks to deliver AADT forecast flows for assessment as set out below.

2 Data

Traffic Data

2.11 The data provided to AWP was taken from LoHAM (London Highway Assignment Model), a strategic model representing routeing and congestion of motorised highway trips using London's highway network.

2.12 Data was provided for the AM, Interpeak (IP) and PM peak hours; for the years 2016, 2021, 2026, 2031 and 2041. The peak hours are understood to be defined as:

- AM Peak: 0800 – 0900
- Interpeak: average hour 1000 – 1600
- PM Peak: 1700 – 1800

2.2 The data was provided in a Shapefile (.shx) format, with each year and time period (eg. 2016 AM) being split into four shapefiles:

- UserNodes
- UserLinks
- AssignmentNodes
- AssignmentLinks

2.3 The UserNodes and UserLinks contain the basic Link and Node geometry of the SATURN models. The AssignmentNodes and AssignmentLinks are a more detailed representation of the SATURN model network. The standard model outputs for the links and turns are all contained in the AssignmentLinks shapefile.

2.4 The shapefile co-ordinate reference system used is EPSG: 3857 – WGS 84 / Pseudo-Mercator.

2.5 For the purposes of this assessment, the AssignmentLinks shapefile has been used across all scenarios.

EFSAC Data

2.6 The shapefile for the Epping Forest Special Area of Conservation (EFSAC) was obtained from the UK Government Open Data Portal under the Open Government Licence. The shapefile is published by Natural England, and the dataset GUID is 6ecea2a1-5d2e-4f53-ba1f-690f4046ed1c.

3 Methodology

Study Network Preparation

3.1 The study area is defined both in the brief, and by taking a 200m buffer from the EFSAC boundary; this defines the area of interest as required in the brief.

3.2 An intersect of the EFSAC buffer and the SATURN model links provides the links which fall within the EFSAC and the buffer area. Where a link is only partially captured within the intersect (eg. only one direction), then this is manually added to the shapefile as an additional attribute, based on the base SATURN layer attributes.

3.3 The links identified as lying within the EFSAC and its buffer are exported as a CSV file; the link unique identifier numbers are then Index matched to the link names given as a separate dataset. This allows the identification of links which lie outside of the EFSAC buffer area, but need to be included in the study.

3.4 Where links are missing due to not falling within the EFSAC area, these are again manually copied over from the EFSAC layer to provide a complete list of study links, complete with link name, start and finish node, and link ID – these are the common values which will allow matching across all the supplied datasets.

3.5 The resulting table of study links is exported and saved as a CSV file to join to datasets.

Obtaining Data from the SATURN Model

3.6 For each year, the three time-period (AM/IP/PM) AssignmentLink shapefiles are loaded into the GIS model. The layers are merged to form one shapefile per year period.

3.7 The merged layer shapefile is joined to the "master" table which contains the unique link IDs, names and node references, to filter the study links only.

3.8 The study links are provided in a one-way flow; thus an aggregate function is performed to obtain two-way flows on all the study links for each time period.

3.9 The resultant attribute table is exported as a CSV file and saved against the relevant time period. The process is repeated for each year given.

Excel – DfT Data

3.10 In order to estimate the AADT for each year, existing DfT traffic count data is used. The nearest DfT count point to each link defined within the study area is used; to enable the most accurate representation of traffic flows on that specific part of the link.

3.11 The DfT data is extracted from the DfT Data website, with full raw data filtered to show the AADT, AM peak, average IP hour and PM peak for each

count point. The peaks are combined and the AADT divided by the combined peak value to provide a factor for each link.

3.12 Where no DfT count data is available, the average factor across all links is used instead.

Excel – SATURN Data

3.13 Each CSV file associated with each year is loaded into Excel, and a PivotTable is created from the data. The PivotTable is asked to show:

- Link Name
- Total vehicles for each peak period
- Combined total vehicles for the peak periods

3.14 The process is repeated in a separate PivotTable for the HGV numbers.

3.15 The data from the PivotTable is linked to the datasheet which is issued to the client. This is set out in AM, IP and PM columns for each year, and the estimated AADT for each link is derived using the factor obtained from the DfT calculations. The representative formula is:

∑ (AM + IP + PM values) * DfT Factor = Estimated AADT

3.16 The methodology is repeated across all the required years (2016, 2021, 2031 and 2041) to provide the future estimated AADT for each link.

Growth Estimations

3.17 To determine the change in traffic flows on each link, the difference in AADT between the base year (2016) and each future year is provided in the datasheet. This is conditionally formatted to highlight where the increase in traffic flows exceed >1,000, as defined in the brief.

HGV Data

3.18 An identical methodology as set out in paragraphs 3.10 – 3.17 is employed to determine the HGV AADT flows; however, as the data is provided in PCUs (Passenger Car Unit), with a PCU value of 2.3 for each HGV. To obtain the actual flows therefore, each output from the SATURN HGV flows is divided by 2.3.

3.19 The change in HGV flows is formatted to highlight future flows exceeding >200 HGVs.

Appendix C – Model Verification

A12 Monitoring

Most nitrogen dioxide (NO_2) is produced in the atmosphere by reaction of nitric oxide (NO) with ozone. It is therefore most appropriate to verify the model in terms of primary pollutant emissions.

Verification of concentrations predicted by the ADMS model has followed the methodology presented in LAQM.TG(16).

Verification of the model results has been carried out against data recorded at monitoring sites 6 and 12, both located at roadside locations adjacent to the A12. Verification has been carried out against 2019 monitoring data.

The model output of road-NO_x (i.e. the component of total NO_x coming from road traffic) has been compared with the 'measured' road-NO_x (Figure C1). The 'measured' road NO_x has been calculated from the measured NO_2 concentrations by using the DEFRA NO_x from NO_2 calculator available on the UK-AIR website.

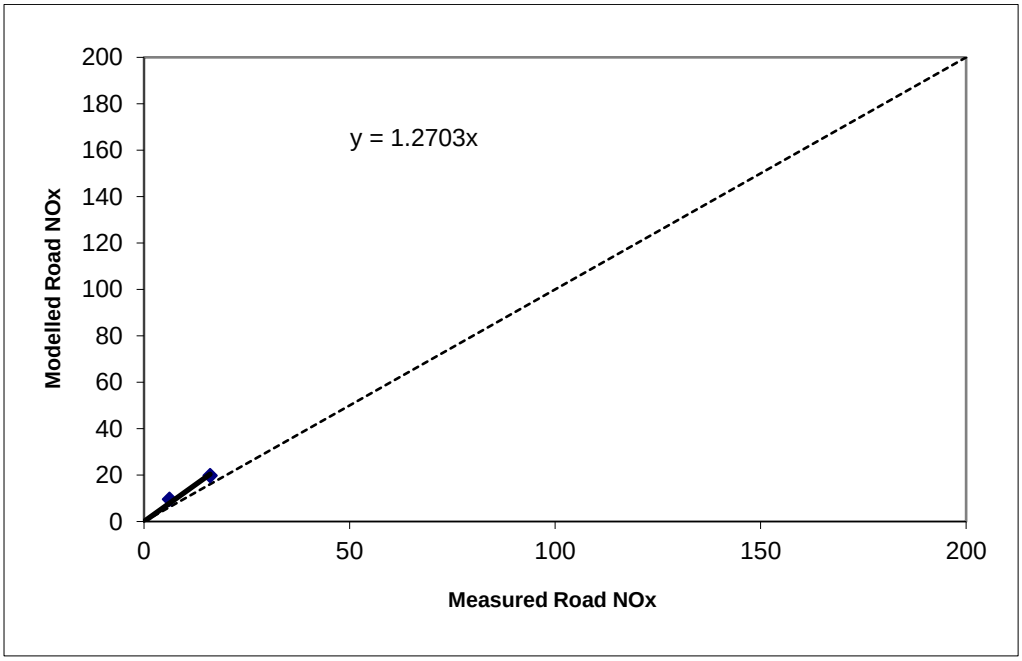


FIGURE C1: COMPARISON OF MODELLED ROAD NO_X WITH MEASURED ROAD NO_X

Figure C1 shows that the ADMS model is over predicting NO_x concentrations at both monitoring site. Further analysis shows that the model is over predicting NO_2 concentrations by 5% and at site 12 by 4.7%. To ensure a cautious approach no adjustment factor has been calculated or applied to receptors located in the vicinity of the A12 (i.e. receptors 1 and 2).

Urban Areas of LBWF

Verification of the model results has been carried out against data recorded at monitoring sites 33 and 37, both located at roadside locations. Verification has been carried out against 2019 monitoring data. At the time of undertaking model verification no data was available from the Epping Forest monitoring sites for 2019 therefore these were not included within the verification process.

The model output of road-NO_x (i.e. the component of total NO_x coming from road traffic) has been compared with the 'measured' road-NO_x (Figure C2). The 'measured' road NO_x has been calculated

from the measured NO_2 concentrations by using the DEFRA NO_x from NO_2 calculator available on the UK-AIR website.

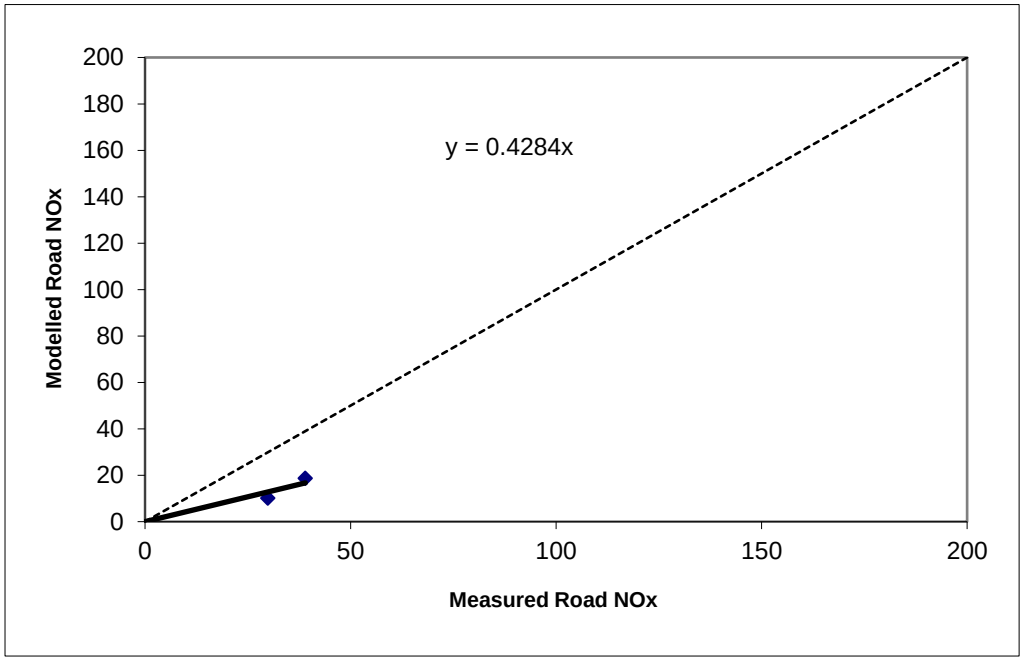


FIGURE C2: COMPARISON OF MODELLED ROAD NO_X WITH MEASURED ROAD NO_X

Figure C2 shows that the ADMS model is under-predicted the road-NO_x concentrations at the monitoring sites. An adjustment factor has therefore been determined as the ratio between the measured road-NO_x contribution and the modelled road-NO_x contribution, forced through zero (1/0.4284 =2.33). This factor has been applied to the modelled road-NO_x concentration for each location to provide an adjusted modelled road-NO_x concentration.

The annual mean road-NO_2 concentration was determined using the DEFRA NO_x:NO_2 spread sheet calculation tool and added to the background NO_2 concentration to produce a total adjusted NO_2 concentration.

Figure C3 shows the adjusted modelled total NO_2 vs monitored NO_2. There is good agreement, but the best fit line forced through zero still has a slight departure from a 1:1 line, thus a secondary adjustment factor, to be applied to the adjusted modelled total NO2, was calculated (1/0.9953=1.005).

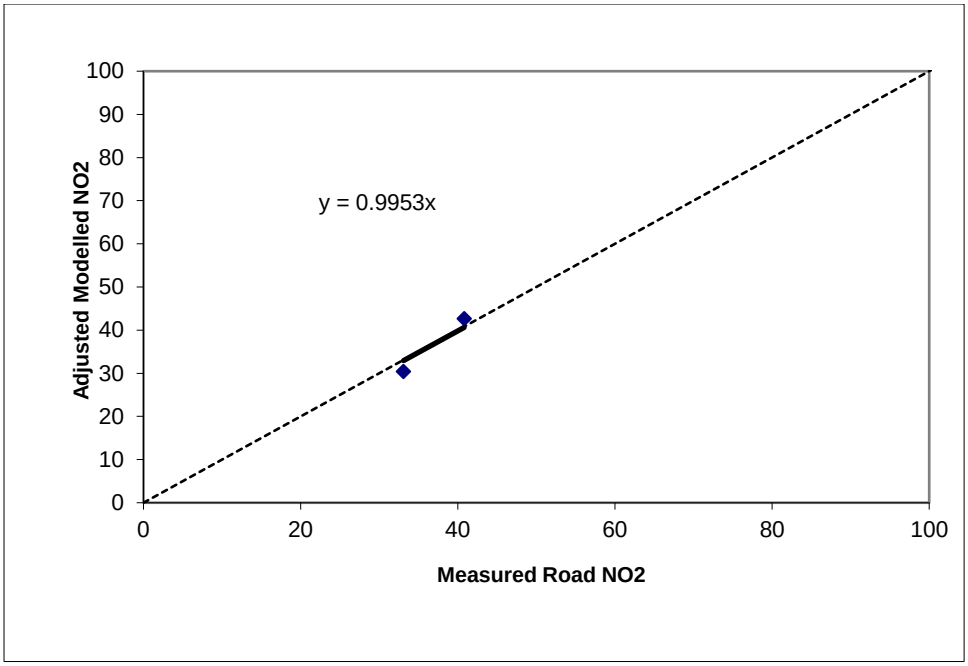
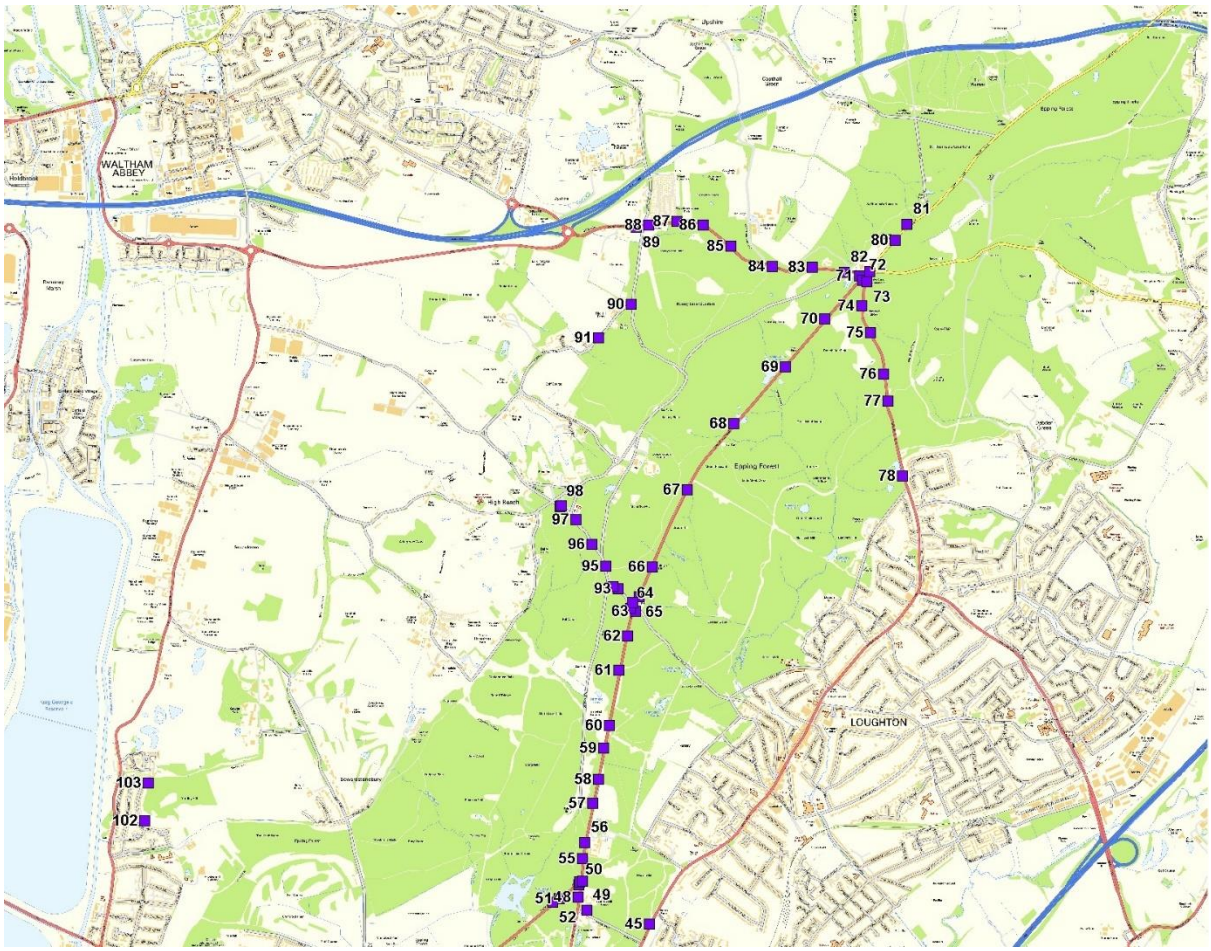
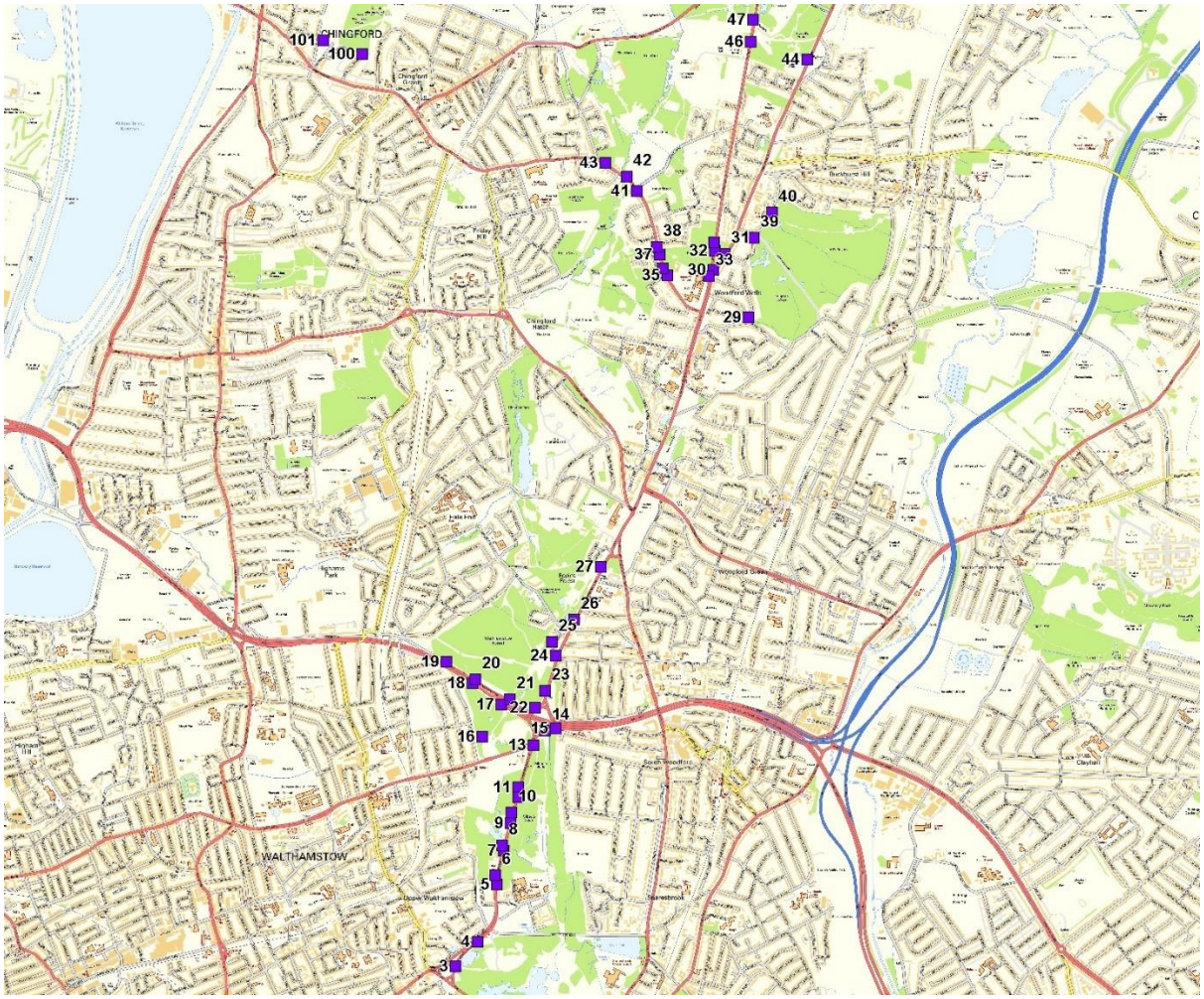


FIGURE C3: COMPARISON OF MODELLED NO_2 WITH MEASURED NO_x

The adjustment factor of 2.33 has been applied to the modelled NO_x-road concentrations predicted at the selected roadside receptor locations. The predicted NO_2-road concentrations, calculated using the NO_x-NO_2 converter tool, have subsequently been added to background NO_2 and adjusted by 1.005 to provide the final predicted annual mean NO_2 concentrations at each receptor.

Appendix D – Receptor Locations

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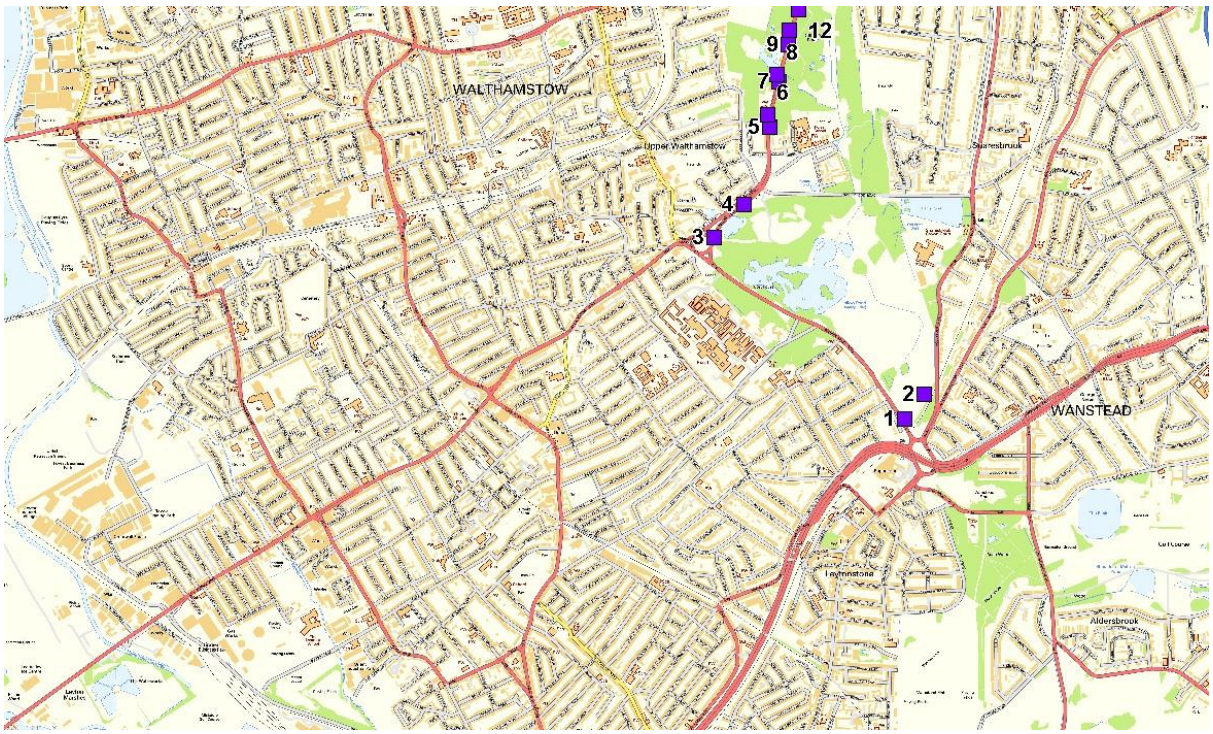
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Appendix E – Background Data used in Modelling

Table E1: Annual Mean Background NO_2 and NO_x Concentrations from Defra Maps (µg/m^3)						
OS Grid Square	**NO_x**			**NO_2**		
	2019	**2021**	**2030**	**2019**	**2021**	**2030**
539753, 188027	35.9	32.0	24.2	24.0	21.8	17.0
538854, 188880	37.9	33.9	26.6	24.9	22.8	18.4
538993, 189038	35.2	31.5	24.5	23.5	21.4	17.2
539117, 189402	34.6	30.8	23.2	23.2	21.1	16.5
539250, 190016	45.7	39.9	27.1	29.4	26.4	18.9
538962, 190674	42.1	37.1	26.5	27.4	24.7	18.4
539605, 191077	33.2	29.6	22.0	22.5	20.5	15.7
539353, 192778	28.7	25.7	19.7	19.9	18.1	15.7
540713, 192996	29.7	26.6	20.2	20.5	18.7	14.6
540489, 193293	27.9	25.1	19.1	19.5	17.8	13.9
539941, 193885	27.1	24.4	18.8	19.0	17.3	13.7
541086, 194627	25.2	22.8	17.4	17.9	16.3	12.8
541279, 195053	23.3	21.0	16.1	17.9	15.2	11.9
540726, 194738	25.0	22.5	17.2	17.7	16.2	12.7
540802, 195232	24.0	21.6	16.6	17.1	15.6	12.3
540941, 196018	21.8	19.7	15.2	15.8	14.4	11.4
541014, 196378	21.0	19.0	14.6	15.2	13.9	10.9
541188, 197140	19.7	17.8	14.6	14.4	13.1	10.2
541841, 198389	20.7	18.6	13.9	15.1	13.7	10.5
542186, 198771	19.3	18.6	12.9	14.2	12.9	9.8
542447, 199089	21.6	19.3	13.8	15.7	14.3	10.5
542754, 198999	19.3	17.4	12.9	14.2	12.9	9.8
542747, 199405	21.6	19.3	13.8	15.7	14.3	10.5
541820, 199575	24.6	21.9	15.2	17.7	15.9	11.4
540942, 198962	21.3	19.2	14.4	15.4	14.1	10.8
541166, 197198	19.7	17.8	13.5	14.4	14.1	10.2
540988, 197442	20.9	18.9	14.6	15.2	14.1	10.9
538264, 194661	27.5	24.7	19.0	19.2	17.5	13.9
537915, 195742	26.0	23.4	18.0	18.3	16.8	13.3

Table E2: Background Concentrations and Deposition Rates from APIS Website				
OS Grid Square	NH_3 (µg/m^3)	N-Deposition (kg/ha/yr)	Acid Deposition (keq/ha/yr)	
			Nitrogen	Sulphur
539753, 188027	2.67	38.2	2.7	0.2
538854, 188880	2.67	38.2	2.7	0.2
538993, 189038	2.67	38.2	2.7	0.2
539117, 189402	2.67	38.2	2.7	0.2
539250, 190016	5.1	62.2	4.4	0.2
538962, 190674	5.1	62.2	4.4	0.2
539605, 191077	5.1	62.2	4.4	0.2
539353, 192778	5.1	62.2	4.4	0.2
540713, 192996	2.03	32.2	2.3	0.2
540489, 193293	2.03	32.2	2.3	0.2
539941, 193885	5.1	62.2	4.4	0.2
541086, 194627	2.03	32.2	2.3	0.2
541279, 195053	1.45	16.1	1.2	0.2
540726, 194738	2.03	18.3	1.3	0.2
540802, 195232	1.45	27.6	2	0.2
540941, 196018	1.45	16.1	1.2	0.2
541014, 196378	1.45	16.1	1.2	0.2
541188, 197140	1.45	16.1	1.2	0.2
541841, 198389	1.45	16.1	1.2	0.2
542186, 198771	1.45	16.1	1.2	0.2
542447, 199089	1.45	16.1	1.2	0.2
542754, 198999	1.45	16.1	1.2	0.2
542747, 199405	1.45	16.1	1.2	0.2
541820, 199575	1.45	27.6	2	0.2
540942, 198962	1.45	27.6	2	0.2
541166, 197198	1.45	27.6	2	0.2
540988, 197442	1.45	27.6	2	0.2
538264, 194661	5.1	62.2	4.4	0.2
537915, 195742	1.8	30.4	2.2	0.2

Appendix F – Modelling Results

Table F1: Predicted Annual Mean NO_x Concentrations (µg/m^3)																
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level	Total NO_x[1]	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
1	539753	188027	woodland	30	41.2	36.3	-0.9	-3.0	N	26.1	-3.3	-11.1	N	6.3	-3.3	-10.9	N
2	539844	188147	woodland	30	38.6	34.1	-0.5	-1.5	N	25.2	-1.7	-5.7	N	3.2	-1.7	-5.5	N
3	538854	188880	woodland	30	61.9	52.8	-5.0	-16.6	N	34.9	-15.7	-52.2	N	27.6	-15.3	-51.0	N
4	538993	189038	woodland	30	98.9	82.3	-12.9	-42.9	N	46.7	-41.5	-138.4	N	74.0	-40.5	-135.0	N
5	539117	189402	woodland	30	117.8	97.8	-16.3	-54.3	N	52.4	-54.1	-180.4	N	97.4	-52.8	-175.9	N
6	539107	189458	woodland	30	74.2	62.6	-7.8	-26.0	N	37.1	-25.8	-85.8	N	46.3	-25.1	-83.6	N
7	539160	189612	woodland	30	117.7	97.7	-16.3	-54.2	N	52.3	-54.0	-180.1	N	97.3	-52.7	-175.7	N
8	539153	189648	woodland	30	81.7	68.6	-9.3	-31.0	N	39.7	-30.6	-102.1	N	55.1	-29.9	-99.5	N
9	539205	189786	woodland	30	126.6	104.4	-18.5	-61.5	N	55.3	-60.0	-200.0	N	107.1	-58.6	-195.2	N
10	539207	189856	woodland	30	95.8	79.7	-12.3	-41.1	N	44.5	-39.9	-133.1	N	71.2	-38.9	-129.8	N
11	539250	190016	woodland	30	105.5	87.7	-12.0	-40.0	N	47.9	-39.0	-129.9	N	69.5	-38.0	-126.7	N
12	539251	189951	woodland	30	118.8	98.2	-16.9	-56.3	N	52.6	-54.9	-183.1	N	98.0	-53.6	-178.7	N
13	539350	190281	woodland	30	138.8	114.7	-18.3	-61.1	N	59.5	-60.7	-202.3	N	108.5	-59.4	-197.8	N
14	539420	190374	woodland	30	93.1	77.8	-9.5	-31.6	N	43.2	-31.3	-104.4	N	54.4	-30.8	-102.7	N

Table F1: Predicted Annual Mean NO_x Concentrations (µg/m^3)																	
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level	Total NO_x[1]	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
15	539488	190391	woodland	30	106.7	88.8	-12.1	-40.5	N	47.5	-40.7	-135.5	N	69.6	-40.2	-134.1	N
16	539025	190335	woodland	30	55.5	48.0	-1.8	-5.9	N	30.5	-6.4	-21.5	N	11.6	-6.3	-21.1	N
17	539148	190540	woodland	30	105.6	88.0	-11.9	-39.6	N	47.0	-40.1	-133.6	N	68.3	-39.7	-132.4	N
18	538962	190674	woodland	30	139.6	115.1	-19.4	-64.6	N	58.7	-65.3	-217.5	N	110.8	-64.7	-215.7	N
19	538797	190810	woodland	30	181.1	148.4	-27.7	-92.3	N	72.4	-93.1	-310.3	N	158.0	-92.3	-307.8	N
20	538982	190699	woodland	30	173.7	142.4	-26.2	-87.3	N	69.9	-88.1	-293.6	N	149.5	-87.4	-291.2	N
21	539197	190574	woodland	30	123.2	102.1	-15.4	-51.4	N	52.8	-51.9	-172.8	N	88.3	-51.4	-171.3	N
22	539360	190520	woodland	30	99.8	83.2	-10.8	-36.1	N	45.2	-36.0	-119.8	N	61.8	-35.5	-118.3	N
23	539420	190629	woodland	30	117.0	96.5	-14.7	-49.1	N	51.5	-46.9	-156.3	N	82.0	-45.9	-153.0	N
24	539490	190848	woodland	30	109.2	91.0	-12.5	-41.6	N	49.3	-41.4	-138.0	N	74.2	-40.4	-134.7	N
25	539465	190937	woodland	30	58.9	50.5	-2.6	-8.6	N	31.6	-8.6	-28.8	N	15.3	-8.5	-28.2	N
26	539605	191077	woodland	30	98.8	82.3	-12.9	-42.9	N	44.9	-42.7	-142.2	N	76.7	-41.6	-138.8	N
27	539777	191412	woodland	30	96.9	80.8	-12.5	-41.5	N	44.2	-41.4	-138.0	N	74.4	-40.4	-134.6	N
28	539353	192778	woodland	30	73.3	63.4	-6.9	-23.0	N	35.9	-28.5	-94.9	N	54.5	-27.9	-92.9	N
29	540713	192996	woodland	30	33.1	29.4	-0.7	-2.2	N	21.5	-2.3	-7.5	N	4.1	-2.2	-7.4	N
30	540489	193293	woodland	30	111.1	92.0	-16.3	-54.2	N	48.4	-53.9	-179.6	N	97.4	-52.8	-175.9	N

Table F1: Predicted Annual Mean NO_x Concentrations (µg/m^3)																
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level	Total NO_x[1]	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
31	540560	193396	woodland	30	82.0	69.0	-10.2	-34.2	N	38.3	-34.8	-116.1	N	63.8	-34.2	-114.1	N
32	540498	193417	woodland	30	108.5	90.0	-15.7	-52.3	N	47.3	-52.3	-174.4	N	94.5	-51.1	-170.2	N
33	540459	193255	woodland	30	89.9	74.7	-12.4	-41.3	N	40.7	-40.3	-134.5	N	72.3	-39.4	-131.3	N
34	540492	193471	woodland	30	89.4	74.6	-12.0	-40.1	N	40.6	-39.9	-133.2	N	72.1	-38.9	-129.8	N
35	540196	193261	woodland	30	71.3	60.9	-7.6	-25.5	N	34.8	-27.7	-92.3	N	51.9	-27.2	-90.8	N
36	540167	193305	woodland	30	62.9	53.9	-6.1	-20.5	N	31.7	-22.3	-74.3	N	41.9	-21.9	-73.1	N
37	540151	193390	woodland	30	73.3	62.5	-8.0	-26.6	N	35.5	-28.9	-96.5	N	54.3	-28.5	-94.9	N
38	540128	193441	woodland	30	62.0	53.2	-6.0	-19.9	N	31.4	-21.7	-72.4	N	40.8	-21.3	-71.1	N
39	540747	193496	woodland	30	36.3	31.9	-1.6	-5.3	N	22.0	-5.4	-18.0	N	9.9	-5.3	-17.6	N
40	540861	193657	woodland	30	34.2	30.2	-1.2	-3.9	N	21.3	-4.0	-13.5	N	7.4	-4.0	-13.2	N
41	540004	193795	woodland	30	63.4	54.4	-6.2	-20.8	N	31.9	-22.7	-75.5	N	42.5	-22.3	-74.3	N
42	539941	193885	woodland	30	71.9	61.3	-7.8	-26.1	N	35.0	-28.5	-95.2	N	53.7	-28.1	-93.6	N
43	539804	193975	woodland	30	72.7	62.0	-8.0	-26.6	N	35.3	-29.1	-96.9	N	54.7	-28.6	-95.2	N
44	541086	194627	heathland	30	62.3	53.3	-6.6	-21.8	N	30.8	-23.7	-78.9	N	44.3	-23.2	-77.4	N
45	541279	195053	heathland	30	62.2	53.1	-6.9	-22.9	N	30.2	-24.9	-82.9	N	46.6	-24.4	-81.4	N
46	540726	194738	heathland	30	105.5	87.5	-15.5	-51.8	N	45.5	-52.3	-174.2	N	94.5	-51.0	-169.9	N

Table F1: Predicted Annual Mean NO_x Concentrations (µg/m^3)																
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level	Total NO_x[1]	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
47	540740	194882	woodland	30	77.1	64.5	-10.1	-33.7	N	35.5	-33.8	-112.8	N	61.2	-33.0	-109.9	N
48	540802	195232	woodland	30	79.6	66.4	-10.8	-36.0	N	36.0	-36.1	-120.4	N	65.1	-35.2	-117.4	N
49	540861	195145	heathland	30	37.4	32.5	-2.6	-8.7	N	21.3	-8.7	-29.1	N	15.8	-8.5	-28.4	N
50	540810	195315	woodland	30	79.2	66.0	-10.9	-36.4	N	35.5	-36.3	-121.1	N	64.0	-35.6	-118.8	N
51	540680	195222	woodland	30	52.8	44.9	-5.5	-18.2	N	26.1	-19.3	-64.2	N	33.0	-19.1	-63.6	N
52	540635	195198	woodland	30	48.8	41.7	-4.7	-15.7	N	24.8	-16.6	-55.3	N	28.5	-16.5	-54.8	N
53	540815	195334	woodland	30	90.2	74.8	-13.1	-43.5	N	39.4	-43.5	-145.0	N	76.8	-42.7	-142.2	N
54	540834	195342	woodland	30	83.7	69.8	-11.6	-38.7	N	37.4	-38.9	-129.8	N	69.8	-38.1	-126.9	N
55	540831	195491	woodland	30	82.3	68.7	-11.3	-37.7	N	37.0	-37.9	-126.3	N	68.4	-36.9	-123.1	N
56	540847	195597	woodland	30	92.3	76.7	-13.2	-44.1	N	40.5	-44.3	-147.8	N	80.1	-43.2	-144.1	N
57	540899	195860	heathland	30	91.9	76.4	-13.2	-43.9	N	40.4	-44.1	-147.1	N	79.7	-43.0	-143.3	N
58	540941	196018	heathland	30	95.4	79.1	-14.2	-47.3	N	41.0	-47.8	-159.2	N	86.4	-46.6	-155.3	N
59	540974	196229	heathland	30	85.9	71.3	-12.4	-41.4	N	37.7	-41.6	-138.6	N	75.1	-40.5	-135.0	N
60	541014	196378	heathland	30	99.7	82.5	-15.2	-50.6	N	42.2	-51.1	-170.3	N	92.4	-49.8	-166.2	N
61	541075	196745	heathland	30	77.1	64.2	-10.9	-36.3	N	34.3	-36.4	-121.4	N	65.8	-35.5	-118.3	N
62	541131	196975	heathland	30	102.0	84.4	-15.6	-52.1	N	43.0	-52.6	-175.3	N	95.1	-51.3	-171.0	N

Table F1: Predicted Annual Mean NO_x Concentrations (µg/m^3)																
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level	Total NO_x[1]	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
63	541188	197140	heathland	30	66.9	55.3	-9.7	-32.5	N	31.0	-30.9	-102.9	N	54.7	-30.1	-100.2	N
64	541153	197161	heathland	30	59.7	49.7	-8.2	-27.2	N	28.6	-26.0	-86.7	N	46.8	-25.2	-83.9	N
65	541213	197236	woodland	30	131.4	106.4	-23.1	-77.0	N	53.2	-73.1	-243.7	N	129.1	-71.3	-237.8	N
66	541296	197435	woodland	30	105.6	87.2	-16.6	-55.3	N	44.8	-55.8	-185.9	N	101.0	-54.4	-181.3	N
67	541531	197949	woodland	30	102.2	84.4	-15.9	-53.0	N	43.5	-53.5	-178.5	N	96.9	-52.2	-174.1	N
68	541841	198389	heathland	30	92.9	77.0	-13.9	-46.4	N	39.3	-46.9	-156.3	N	84.8	-45.7	-152.4	N
69	542186	198771	heathland	30	110.1	91.9	-17.5	-58.3	N	44.8	-58.9	-196.3	N	106.6	-57.4	-191.4	N
70	542447	199089	heathland	30	91.4	75.7	-13.4	-44.7	N	38.3	-45.2	-150.8	N	82.0	-44.1	-147.1	N
71	542679	199373	heathland	30	91.8	75.7	-13.8	-46.1	N	38.7	-45.3	-150.9	N	82.5	-44.0	-146.8	N
72	542698	199346	heathland	30	98.6	80.9	-15.4	-51.5	N	40.8	-50.0	-166.6	N	89.8	-48.8	-162.6	N
73	542729	199339	heathland	30	86.3	71.6	-12.5	-41.6	N	36.8	-41.7	-139.0	N	76.1	-40.9	-136.2	N
74	542695	199176	heathland	30	57.1	48.4	-6.4	-21.4	N	26.6	-22.7	-75.5	N	42.3	-22.2	-74.0	N
75	542754	198999	heathland	30	76.1	64.1	-10.1	-33.7	N	33.4	-36.2	-120.8	N	67.8	-35.6	-118.6	N
76	542843	198720	heathland	30	54.2	46.1	-6.2	-20.7	N	25.6	-22.3	-74.2	N	41.7	-21.9	-72.8	N
77	542871	198540	heathland	30	64.6	54.6	-8.0	-26.8	N	29.3	-28.9	-96.2	N	54.0	-28.4	-94.6	N
78	542969	198044	woodland	30	45.5	39.0	-4.7	-15.5	N	22.4	-16.7	-55.7	N	31.3	-16.4	-54.7	N

Table F1: Predicted Annual Mean NO_x Concentrations (µg/m^3)																	
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level	Total NO_x[1]	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
79	542747	199405	heathland	30	109.2	89.1	-17.8	-59.2	N	44.4	-57.0	-189.9	N	101.8	-55.6	-185.2	N
80	542918	199614	heathland	30	81.1	67.3	-11.5	-38.4	N	34.7	-38.6	-128.5	N	69.8	-37.6	-125.2	N
81	542997	199717	woodland	30	77.1	64.1	-10.7	-35.7	N	33.3	-36.0	-120.0	N	65.2	-35.1	-117.0	N
82	542579	199398	woodland	30	68.1	57.6	-8.2	-27.3	N	31.1	-29.2	-97.2	N	56.8	-28.0	-93.3	N
83	542363	199431	woodland	30	84.0	71.1	-10.6	-35.3	N	37.3	-38.9	-129.5	N	76.9	-37.3	-124.3	N
84	542100	199437	woodland	30	77.1	65.4	-9.5	-31.6	N	34.7	-34.6	-115.4	N	68.3	-33.3	-110.8	N
85	541820	199575	woodland	30	100.5	85.0	-12.8	-42.6	N	43.9	-47.2	-157.2	N	93.8	-45.2	-150.7	N
86	541639	199713	woodland	30	85.4	72.4	-10.3	-34.4	N	38.2	-37.9	-126.3	N	74.9	-36.4	-121.2	N
87	541463	199740	woodland	30	79.7	67.7	-9.3	-31.0	N	36.1	-34.2	-114.2	N	68.1	-32.8	-109.5	N
88	541274	199714	woodland	30	94.0	79.5	-11.7	-39.1	N	41.4	-43.2	-143.9	N	85.6	-41.4	-138.0	N
89	541190	199701	woodland	30	67.5	57.5	-7.2	-24.1	N	31.4	-26.6	-88.7	N	53.0	-25.5	-85.0	N
90	541159	199185	woodland	30	29.4	26.2	-0.4	-1.5	N	17.6	-2.5	-8.2	N	8.0	-1.1	-3.8	N
91	540942	198962	woodland	30	25.2	22.8	-0.2	-0.8	N	16.4	-1.9	-6.4	N	6.8	-0.8	-2.5	N
92	541166	197198	woodland	30	65.4	54.4	-9.2	-30.5	N	29.8	-29.5	-98.3	N	54.0	-28.3	-94.4	N
93	541072	197292	woodland	30	47.3	40.5	-4.9	-16.2	N	23.9	-17.2	-57.4	N	34.3	-16.1	-53.6	N
94	541039	197304	heathland	30	43.2	37.2	-4.1	-13.8	N	22.4	-14.7	-49.0	N	29.2	-13.8	-45.8	N

Table F1: Predicted Annual Mean NO_x Concentrations (µg/m^3)																
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level	Total NO_x[1]	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NO_x [1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
95	540988	197442	woodland	30	46.5	40.1	-4.4	-14.8	N	24.2	-15.9	-53.1	N	31.9	-14.8	-49.5	N
96	540895	197584	woodland	30	38.9	33.8	-3.1	-10.4	N	21.4	-11.2	-37.3	N	22.5	-10.4	-34.7	N
97	540790	197752	woodland	30	54.0	46.3	-5.7	-19.0	N	27.1	-20.5	-68.3	N	41.4	-19.0	-63.5	N
98	540683	197838	woodland	30	45.7	39.4	-4.3	-14.2	N	23.9	-15.4	-51.2	N	30.9	-14.3	-47.7	N
99	540693	197845	woodland	30	45.8	39.5	-4.3	-14.3	N	24.0	-15.4	-51.3	N	31.1	-14.3	-47.6	N
100	538264	194661	woodland	30	30.1	26.6	-0.7	-2.3	N	20.0	-1.7	-5.6	N	2.9	-1.7	-5.5	N
101	538017	194751	woodland	30	30.2	26.7	-0.7	-2.5	N	20.0	-1.8	-5.9	N	3.1	-1.8	-5.8	N
102	537915	195742	woodland	30	27.5	24.7	-0.2	-0.7	N	18.6	-0.9	-2.9	N	1.9	-0.8	-2.7	N
103	537938	195996	woodland	30	27.9	25.1	-0.3	-0.9	N	18.8	-1.1	-3.7	N	2.5	-1.0	-3.5	N

[1] Data includes process contribution (i.e. emissions from vehicles) and background concentrations from relevant assessment year. For 2031 and 2041 background concentrations have been taken from the 2030 background data.

[2] this is the change due to the PC only for the relevant assessment year and doesn't take account of the anticipated reduction in background concentrations between the assessment year and the 2019 base year

Table F2: Predicted Annual Mean NH_3 Concentrations ($\mu g/m^3$)																	
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level ($\mu g/m^3$)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
1	539753	188027	woodland	1	3.1	3.1	0.018	1.8	**Y**	3.2	0.109	10.9	**Y**	3.2	0.128	12.8	**Y**
2	539844	188147	woodland	1	2.9	2.9	0.009	0.9	N	2.9	0.054	5.4	**Y**	3.0	0.064	6.4	**Y**
3	538854	188880	woodland	1	3.2	3.2	-0.014	-1.4	N	3.3	0.078	7.8	**Y**	3.4	0.109	10.9	**Y**
4	538993	189038	woodland	1	4.4	4.4	-0.045	-4.5	N	4.7	0.237	23.7	**Y**	4.8	0.333	33.3	**Y**
5	539117	189402	woodland	1	5.4	5.3	-0.068	-6.8	N	5.7	0.358	35.8	**Y**	5.9	0.504	50.4	**Y**
6	539107	189458	woodland	1	3.9	3.9	-0.031	-3.1	N	4.1	0.171	17.1	**Y**	4.2	0.240	24.0	**Y**
7	539160	189612	woodland	1	5.3	5.3	-0.068	-6.8	N	5.7	0.358	35.8	**Y**	5.8	0.503	50.3	**Y**
8	539153	189648	woodland	1	4.2	4.1	-0.037	-3.7	N	4.4	0.202	20.2	**Y**	4.5	0.283	28.3	**Y**
9	539205	189786	woodland	1	5.3	5.2	-0.064	-6.4	N	5.6	0.348	34.8	**Y**	5.7	0.487	48.7	**Y**
10	539207	189856	woodland	1	4.4	4.4	-0.041	-4.1	N	4.6	0.233	23.3	**Y**	4.7	0.325	32.5	**Y**
11	539250	190016	woodland	1	6.8	6.8	-0.038	-3.8	N	7.0	0.230	23.0	**Y**	7.1	0.319	31.9	**Y**
12	539251	189951	woodland	1	5.0	5.0	-0.057	-5.7	N	5.4	0.320	32.0	**Y**	5.5	0.447	44.7	**Y**
13	539350	190281	woodland	1	7.4	7.4	-0.011	-1.1	N	7.8	0.359	35.9	**Y**	7.9	0.471	47.1	**Y**
14	539420	190374	woodland	1	6.5	6.5	-0.002	-0.2	N	6.8	0.217	21.7	**Y**	6.8	0.253	25.3	**Y**
15	539488	190391	woodland	1	7.2	7.2	0.008	0.8	N	7.5	0.318	31.8	**Y**	7.5	0.343	34.3	**Y**
16	539025	190335	woodland	1	5.4	5.4	0.008	0.8	N	5.5	0.058	5.8	**Y**	5.5	0.066	6.6	**Y**

Table F2: Predicted Annual Mean NH_3 Concentrations ($\mu g/m^3$)																	
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level ($\mu g/m^3$)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
17	539148	190540	woodland	1	7.3	7.3	0.014	1.4	**Y**	7.6	0.329	32.9	**Y**	7.6	0.346	34.6	**Y**
18	538962	190674	woodland	1	8.6	8.7	0.022	2.2	**Y**	9.2	0.538	53.8	**Y**	9.2	0.560	56.0	**Y**
19	538797	190810	woodland	1	10.2	10.2	0.031	3.1	**Y**	10.9	0.767	76.7	**Y**	11.0	0.798	79.8	**Y**
20	538982	190699	woodland	1	9.9	9.9	0.029	2.9	**Y**	10.6	0.726	72.6	**Y**	10.6	0.755	75.5	**Y**
21	539197	190574	woodland	1	7.9	7.9	0.017	1.7	**Y**	8.3	0.425	42.5	**Y**	8.3	0.446	44.6	**Y**
22	539360	190520	woodland	1	6.9	6.9	0.004	0.4	N	7.2	0.270	27.0	**Y**	7.2	0.298	29.8	**Y**
23	539420	190629	woodland	1	7.0	6.9	-0.031	-3.1	N	7.2	0.260	26.0	**Y**	7.3	0.339	33.9	**Y**
24	539490	190848	woodland	1	7.2	7.1	-0.045	-4.5	N	7.4	0.279	27.9	**Y**	7.5	0.382	38.2	**Y**
25	539465	190937	woodland	1	5.5	5.5	-0.004	-0.4	N	5.6	0.063	6.3	**Y**	5.6	0.079	7.9	**Y**
26	539605	191077	woodland	1	7.2	7.2	-0.050	-5.0	N	7.5	0.286	28.6	**Y**	7.6	0.397	39.7	**Y**
27	539777	191412	woodland	1	7.2	7.1	-0.051	-5.1	N	7.4	0.276	27.6	**Y**	7.5	0.386	38.6	**Y**
28	539353	192778	woodland	1	6.5	6.5	0.001	0.1	N	6.8	0.214	21.4	**Y**	6.8	0.281	28.1	**Y**
29	540713	192996	woodland	1	2.1	2.1	-0.001	-0.1	N	2.2	0.016	1.6	**Y**	2.2	0.021	2.1	**Y**
30	540489	193293	woodland	1	4.3	4.2	-0.034	-3.4	N	4.6	0.335	33.5	**Y**	4.7	0.441	44.1	**Y**
31	540560	193396	woodland	1	3.4	3.4	-0.006	-0.6	N	3.7	0.238	23.8	**Y**	3.7	0.294	29.4	**Y**
32	540498	193417	woodland	1	4.6	4.5	-0.061	-6.1	N	5.0	0.351	35.1	**Y**	5.1	0.488	48.8	**Y**

Table F2: Predicted Annual Mean NH_3 Concentrations ($\mu g/m^3$)																
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level ($\mu g/m^3$)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
33	540459	193255	woodland	1	3.8	3.7	-0.037	-3.7	N	4.0	0.242	24.2	**Y**	4.1	0.331	33.1	**Y**
34	540492	193471	woodland	1	4.0	4.0	-0.047	-4.7	N	4.3	0.269	26.9	**Y**	4.4	0.375	37.5	**Y**
35	540196	193261	woodland	1	3.4	3.4	0.025	2.5	**Y**	3.7	0.278	27.8	**Y**	3.7	0.325	32.5	**Y**
36	540167	193305	woodland	1	3.1	3.2	0.020	2.0	**Y**	3.4	0.223	22.3	**Y**	3.4	0.261	26.1	**Y**
37	540151	193390	woodland	1	3.5	3.5	0.027	2.7	**Y**	3.8	0.292	29.2	**Y**	3.8	0.341	34.1	**Y**
38	540128	193441	woodland	1	3.1	3.1	0.019	1.9	**Y**	3.3	0.218	21.8	**Y**	3.4	0.256	25.6	**Y**
39	540747	193496	woodland	1	2.3	2.3	-0.002	-0.2	N	2.3	0.041	4.1	**Y**	2.3	0.052	5.2	**Y**
40	540861	193657	woodland	1	2.2	2.2	-0.001	-0.1	N	2.3	0.031	3.1	**Y**	2.3	0.040	4.0	**Y**
41	540004	193795	woodland	1	3.2	3.2	0.021	2.1	**Y**	3.4	0.230	23.0	**Y**	3.4	0.268	26.8	**Y**
42	539941	193885	woodland	1	6.5	6.6	0.027	2.7	**Y**	6.8	0.291	29.1	**Y**	6.9	0.339	33.9	**Y**
43	539804	193975	woodland	1	6.6	6.6	0.028	2.8	**Y**	6.9	0.297	29.7	**Y**	6.9	0.346	34.6	**Y**
44	541086	194627	heathland	1	3.3	3.3	0.002	0.2	N	3.5	0.225	22.5	**Y**	3.6	0.271	27.1	**Y**
45	541279	195053	heathland	1	2.8	2.8	0.002	0.2	N	3.0	0.238	23.8	**Y**	3.1	0.286	28.6	**Y**
46	540726	194738	heathland	1	4.8	4.7	-0.070	-7.0	N	5.2	0.368	36.8	**Y**	5.3	0.518	51.8	**Y**
47	540740	194882	woodland	1	3.8	3.8	-0.045	-4.5	N	4.1	0.239	23.9	**Y**	4.1	0.335	33.5	**Y**
48	540802	195232	woodland	1	3.3	3.3	-0.046	-4.6	N	3.6	0.250	25.0	**Y**	3.7	0.351	35.1	**Y**

Table F2: Predicted Annual Mean NH_3 Concentrations ($\mu g/m^3$)																	
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level ($\mu g/m^3$)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
49	540861	195145	heathland	1	1.9	1.9	-0.010	-1.0	N	2.0	0.061	6.1	**Y**	2.0	0.085	8.5	**Y**
50	540810	195315	woodland	1	3.2	3.1	-0.030	-3.0	N	3.4	0.211	21.1	**Y**	3.5	0.289	28.9	**Y**
51	540680	195222	woodland	1	2.4	2.4	0.006	0.6	N	2.5	0.087	8.7	**Y**	2.5	0.106	10.6	**Y**
52	540635	195198	woodland	1	2.2	2.3	0.005	0.5	N	2.3	0.075	7.5	**Y**	2.3	0.090	9.0	**Y**
53	540815	195334	woodland	1	3.5	3.5	-0.038	-3.8	N	3.8	0.258	25.8	**Y**	3.9	0.354	35.4	**Y**
54	540834	195342	woodland	1	3.4	3.4	-0.045	-4.5	N	3.7	0.258	25.8	**Y**	3.8	0.360	36.0	**Y**
55	540831	195491	woodland	1	3.4	3.4	-0.050	-5.0	N	3.7	0.265	26.5	**Y**	3.8	0.373	37.3	**Y**
56	540847	195597	woodland	1	3.8	3.7	-0.060	-6.0	N	4.1	0.311	31.1	**Y**	4.2	0.438	43.8	**Y**
57	540899	195860	heathland	1	3.8	3.7	-0.060	-6.0	N	4.1	0.310	31.0	**Y**	4.2	0.437	43.7	**Y**
58	540941	196018	heathland	1	4.0	3.9	-0.065	-6.5	N	4.3	0.336	33.6	**Y**	4.4	0.473	47.3	**Y**
59	540974	196229	heathland	1	3.6	3.6	-0.057	-5.7	N	3.9	0.292	29.2	**Y**	4.1	0.412	41.2	**Y**
60	541014	196378	heathland	1	4.1	4.1	-0.070	-7.0	N	4.5	0.359	35.9	**Y**	4.7	0.507	50.7	**Y**
61	541075	196745	heathland	1	3.4	3.3	-0.049	-4.9	N	3.6	0.256	25.6	**Y**	3.7	0.361	36.1	**Y**
62	541131	196975	heathland	1	4.2	4.1	-0.071	-7.1	N	4.6	0.369	36.9	**Y**	4.7	0.520	52.0	**Y**
63	541188	197140	heathland	1	2.6	2.6	-0.028	-2.8	N	2.8	0.162	16.2	**Y**	2.8	0.231	23.1	**Y**
64	541153	197161	heathland	1	2.4	2.4	-0.020	-2.0	N	2.6	0.150	15.0	**Y**	2.7	0.220	22.0	**Y**

Table F2: Predicted Annual Mean NH_3 Concentrations ($\mu g/m^3$)																	
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level ($\mu g/m^3$)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
65	541213	197236	woodland	1	4.1	4.1	-0.067	-6.7	N	4.5	0.367	36.7	**Y**	4.7	0.521	52.1	**Y**
66	541296	197435	woodland	1	4.4	4.3	-0.075	-7.5	N	4.8	0.392	39.2	**Y**	4.9	0.555	55.5	**Y**
67	541531	197949	woodland	1	4.3	4.2	-0.073	-7.3	N	4.7	0.377	37.7	**Y**	4.8	0.533	53.3	**Y**
68	541841	198389	heathland	1	3.9	3.9	-0.063	-6.3	N	4.3	0.331	33.1	**Y**	4.4	0.467	46.7	**Y**
69	542186	198771	heathland	1	4.6	4.5	-0.079	-7.9	N	5.0	0.416	41.6	**Y**	5.1	0.586	58.6	**Y**
70	542447	199089	heathland	1	3.8	3.8	-0.058	-5.8	N	4.1	0.322	32.2	**Y**	4.3	0.453	45.3	**Y**
71	542679	199373	heathland	1	3.1	3.2	0.005	0.5	N	3.5	0.309	30.9	**Y**	3.6	0.414	41.4	**Y**
72	542698	199346	heathland	1	3.3	3.3	-0.022	-2.2	N	3.6	0.296	29.6	**Y**	3.7	0.398	39.8	**Y**
73	542729	199339	heathland	1	3.0	3.0	-0.003	-0.3	N	3.3	0.276	27.6	**Y**	3.4	0.349	34.9	**Y**
74	542695	199176	heathland	1	2.6	2.6	0.000	0.0	N	2.8	0.199	19.9	**Y**	2.8	0.245	24.5	**Y**
75	542754	198999	heathland	1	3.3	3.3	0.004	0.4	N	3.6	0.329	32.9	**Y**	3.7	0.396	39.6	**Y**
76	542843	198720	heathland	1	2.6	2.6	0.003	0.3	N	2.8	0.202	20.2	**Y**	2.8	0.243	24.3	**Y**
77	542871	198540	heathland	1	2.9	2.9	0.004	0.4	N	3.2	0.263	26.3	**Y**	3.2	0.315	31.5	**Y**
78	542969	198044	woodland	1	2.3	2.3	0.002	0.2	N	2.4	0.152	15.2	**Y**	2.5	0.182	18.2	**Y**
79	542747	199405	heathland	1	3.6	3.5	-0.029	-2.9	N	3.9	0.324	32.4	**Y**	4.0	0.442	44.2	**Y**
80	542918	199614	heathland	1	3.4	3.4	-0.048	-4.8	N	3.7	0.273	27.3	**Y**	3.8	0.383	38.3	**Y**

Table F2: Predicted Annual Mean NH_3 Concentrations ($\mu g/m^3$)																	
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level ($\mu g/m^3$)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
81	542997	199717	woodland	1	3.3	3.3	-0.046	-4.6	N	3.6	0.255	25.5	**Y**	3.7	0.359	35.9	**Y**
82	542579	199398	woodland	1	2.7	2.8	0.067	6.7	**Y**	3.0	0.333	33.3	**Y**	3.1	0.436	43.6	**Y**
83	542363	199431	woodland	1	3.1	3.3	0.114	11.4	**Y**	3.6	0.492	49.2	**Y**	3.8	0.632	63.2	**Y**
84	542100	199437	woodland	1	3.0	3.1	0.104	10.4	**Y**	3.4	0.442	44.2	**Y**	3.5	0.567	56.7	**Y**
85	541820	199575	woodland	1	3.5	3.6	0.145	14.5	**Y**	4.1	0.608	60.8	**Y**	4.3	0.780	78.0	**Y**
86	541639	199713	woodland	1	3.1	3.2	0.117	11.7	**Y**	3.6	0.488	48.8	**Y**	3.7	0.626	62.6	**Y**
87	541463	199740	woodland	1	2.9	3.0	0.106	10.6	**Y**	3.4	0.443	44.3	**Y**	3.5	0.568	56.8	**Y**
88	541274	199714	woodland	1	3.3	3.5	0.134	13.4	**Y**	3.9	0.558	55.8	**Y**	4.0	0.717	71.7	**Y**
89	541190	199701	woodland	1	2.6	2.7	0.082	8.2	**Y**	2.9	0.344	34.4	**Y**	3.0	0.443	44.3	**Y**
90	541159	199185	woodland	1	1.6	1.6	0.024	2.4	**Y**	1.6	0.082	8.2	**Y**	1.8	0.190	19.0	**Y**
91	540942	198962	woodland	1	1.6	1.6	0.028	2.8	**Y**	1.7	0.094	9.4	**Y**	1.8	0.219	21.9	**Y**
92	541166	197198	woodland	1	2.6	2.6	-0.017	-1.7	N	2.8	0.187	18.7	**Y**	2.9	0.280	28.0	**Y**
93	541072	197292	woodland	1	2.3	2.3	0.003	0.3	N	2.5	0.198	19.8	**Y**	2.6	0.317	31.7	**Y**
94	541039	197304	heathland	1	2.2	2.2	0.003	0.3	N	2.4	0.170	17.0	**Y**	2.5	0.273	27.3	**Y**
95	540988	197442	woodland	1	2.3	2.3	0.004	0.4	N	2.5	0.192	19.2	**Y**	2.6	0.308	30.8	**Y**
96	540895	197584	woodland	1	2.0	2.0	0.003	0.3	N	2.2	0.135	13.5	**Y**	2.2	0.216	21.6	**Y**

Table F2: Predicted Annual Mean NH_3 Concentrations (µg/m^3)																	
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level (µg/m^3)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
97	540790	197752	woodland	1	2.5	2.5	0.007	0.7	N	2.8	0.253	25.3	**Y**	2.9	0.409	40.9	**Y**
98	540683	197838	woodland	1	2.2	2.3	0.005	0.5	N	2.4	0.190	19.0	**Y**	2.6	0.305	30.5	**Y**
99	540693	197845	woodland	1	2.2	2.3	0.005	0.5	N	2.4	0.190	19.0	**Y**	2.6	0.306	30.6	**Y**
100	538264	194661	woodland	1	5.2	5.2	0.001	0.1	N	5.2	0.014	1.4	**Y**	5.2	0.017	1.7	**Y**
101	538017	194751	woodland	1	5.2	5.2	0.001	0.1	N	5.2	0.016	1.6	**Y**	5.2	0.019	1.9	**Y**
102	537915	195742	woodland	1	1.8	1.8	0.002	0.2	N	1.9	0.015	1.5	**Y**	1.9	0.021	2.1	**Y**
103	537938	195996	woodland	1	1.9	1.9	0.003	0.3	N	1.9	0.020	2.0	**Y**	1.9	0.028	2.8	**Y**

[1] Data includes process contribution (i.e. emissions from vehicles) and background concentrations from relevant assessment year. For 2031 and 2041 background concentrations have been taken from the 2030 background data.

[2] this is the change due to the PC only for the relevant assessment year and doesn't take account of the anticipated reduction in background concentrations between the assessment year and the 2019 base year

Table F3: Predicted Annual Mean NH_3 Concentrations across 200m Transects (µg/m^3)																	
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level (µg/m^3)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
1a	539753	188027	woodland	1	3.1	3.1	0.018	1.8	**Y**	3.2	0.109	10.9	**Y**	3.2	0.128	12.8	**Y**
1b	539753	188047	woodland	1	3.0	3.1	0.016	1.6	**Y**	3.1	0.094	9.4	**Y**	3.2	0.110	11.0	**Y**
1c	539753	188067	woodland	1	3.0	3.0	0.014	1.4	**Y**	3.1	0.082	8.2	**Y**	3.1	0.096	9.6	**Y**
1d	539753	188087	woodland	1	3.0	3.0	0.012	1.2	**Y**	3.0	0.073	7.3	**Y**	3.0	0.085	8.5	**Y**
1e	539753	188107	woodland	1	2.9	2.9	0.011	1.1	**Y**	3.0	0.065	6.5	**Y**	3.0	0.076	7.6	**Y**
1f	539753	188127	woodland	1	2.9	2.9	0.009	0.9	N	3.0	0.058	5.8	**Y**	3.0	0.068	6.8	**Y**
1g	539753	188147	woodland	1	2.9	2.9	0.008	0.8	N	2.9	0.053	5.3	**Y**	2.9	0.062	6.2	**Y**
1h	539753	188167	woodland	1	2.9	2.9	0.008	0.8	N	2.9	0.048	4.8	**Y**	2.9	0.056	5.6	**Y**
1i	539753	188187	woodland	1	2.9	2.9	0.007	0.7	N	2.9	0.044	4.4	**Y**	2.9	0.052	5.2	**Y**
1j	539753	188207	woodland	1	2.8	2.8	0.006	0.6	N	2.9	0.041	4.1	**Y**	2.9	0.048	4.8	**Y**
1k	539753	188227	woodland	1	2.8	2.8	0.006	0.6	N	2.9	0.038	3.8	**Y**	2.9	0.044	4.4	**Y**
2a	539844	188147	woodland	1	2.9	2.9	0.009	0.9	N	2.9	0.054	5.4	**Y**	3.0	0.064	6.4	**Y**
2b	539844	188167	woodland	1	2.9	2.9	0.008	0.8	N	2.9	0.050	5.0	**Y**	2.9	0.059	5.9	**Y**
2c	539844	188187	woodland	1	2.9	2.9	0.007	0.7	N	2.9	0.046	4.6	**Y**	2.9	0.054	5.4	**Y**
2d	539844	188207	woodland	1	2.8	2.9	0.007	0.7	N	2.9	0.043	4.3	**Y**	2.9	0.051	5.1	**Y**

Table F3: Predicted Annual Mean NH_3 Concentrations across 200m Transects (µg/m^3)																
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level (µg/m^3)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
2e	539844	188227	woodland	1	2.8	2.8	0.006	0.6	N	2.9	0.040	4.0	**Y**	2.9	0.047	4.7	**Y**
2f	539844	188247	woodland	1	2.8	2.8	0.006	0.6	N	2.9	0.038	3.8	**Y**	2.9	0.044	4.4	**Y**
2g	539844	188267	woodland	1	2.8	2.8	0.005	0.5	N	2.9	0.035	3.5	**Y**	2.9	0.041	4.1	**Y**
2h	539844	188287	woodland	1	2.8	2.8	0.005	0.5	N	2.8	0.033	3.3	**Y**	2.8	0.039	3.9	**Y**
2i	539844	188307	woodland	1	2.8	2.8	0.005	0.5	N	2.8	0.031	3.1	**Y**	2.8	0.036	3.6	**Y**
2j	539844	188327	woodland	1	2.8	2.8	0.004	0.4	N	2.8	0.029	2.9	**Y**	2.8	0.034	3.4	**Y**
2k	539844	188347	woodland	1	2.8	2.8	0.004	0.4	N	2.8	0.028	2.8	**Y**	2.8	0.033	3.3	**Y**
83a	542363	199431	woodland	1	3.1	3.3	0.114	11.4	**Y**	3.6	0.492	49.2	**Y**	3.8	0.632	63.2	**Y**
83b	542361	199451	woodland	1	2.1	2.2	0.041	4.1	**Y**	2.3	0.186	18.6	**Y**	2.4	0.240	24.0	**Y**
83c	542360	199473	woodland	1	1.9	1.9	0.023	2.3	**Y**	2.0	0.114	11.4	**Y**	2.0	0.148	14.8	**Y**
83d	542359	199492	woodland	1	1.8	1.8	0.017	1.7	**Y**	1.9	0.085	8.5	**Y**	1.9	0.111	11.1	**Y**
83e	542356	199513	woodland	1	1.7	1.7	0.012	1.2	**Y**	1.8	0.067	6.7	**Y**	1.8	0.087	8.7	**Y**
83f	542354	199352	woodland	1	1.8	1.8	0.013	1.3	**Y**	1.8	0.076	7.6	**Y**	1.9	0.100	10.0	**Y**
83g	542351	199551	woodland	1	1.6	1.7	0.008	0.8	N	1.7	0.048	4.8	**Y**	1.7	0.063	6.3	**Y**
83h	542348	199572	woodland	1	1.6	1.6	0.007	0.7	N	1.7	0.042	4.2	**Y**	1.7	0.056	5.6	**Y**
83i	542345	199592	woodland	1	1.6	1.6	0.006	0.6	N	1.6	0.038	3.8	**Y**	1.7	0.050	5.0	**Y**

Table F3: Predicted Annual Mean NH_3 Concentrations across 200m Transects (µg/m^3)																
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level (µg/m^3)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
83j	542344	199612	woodland	1	1.6	1.6	0.005	0.5	N	1.6	0.034	3.4	**Y**	1.6	0.045	4.5	**Y**
83k	542341	199630	woodland	1	1.6	1.6	0.005	0.5	N	1.6	0.032	3.2	**Y**	1.6	0.042	4.2	**Y**
84a	542100	199437	woodland	1	3.0	3.1	0.104	10.4	**Y**	3.4	0.442	44.2	**Y**	3.5	0.567	56.7	**Y**
84b	542100	199457	woodland	1	2.7	2.8	0.088	8.8	**Y**	3.1	0.374	37.4	**Y**	3.2	0.480	48.0	**Y**
84c	542100	199477	woodland	1	2.1	2.1	0.040	4.0	**Y**	2.2	0.175	17.5	**Y**	2.3	0.226	22.6	**Y**
84d	542100	199497	woodland	1	1.9	1.9	0.025	2.5	**Y**	2.0	0.115	11.5	**Y**	2.0	0.149	14.9	**Y**
84e	542100	199517	woodland	1	1.8	1.8	0.019	1.9	**Y**	1.8	0.086	8.6	**Y**	1.9	0.112	11.2	**Y**
84f	542100	199537	woodland	1	1.7	1.7	0.015	1.5	**Y**	1.8	0.069	6.9	**Y**	1.8	0.090	9.0	**Y**
84g	542100	199557	woodland	1	1.7	1.7	0.012	1.2	**Y**	1.7	0.058	5.8	**Y**	1.7	0.075	7.5	**Y**
84h	542100	199577	woodland	1	1.6	1.6	0.010	1.0	**Y**	1.7	0.050	5.0	**Y**	1.7	0.065	6.5	**Y**
84i	542100	199597	woodland	1	1.6	1.6	0.009	0.9	N	1.7	0.044	4.4	**Y**	1.7	0.057	5.7	**Y**
84j	542100	199617	woodland	1	1.6	1.6	0.008	0.8	N	1.6	0.039	3.9	**Y**	1.7	0.052	5.2	**Y**
84k	542100	199637	woodland	1	1.6	1.6	0.007	0.7	N	1.6	0.036	3.6	**Y**	1.6	0.047	4.7	**Y**
85a	541820	199575	woodland	1	3.5	3.6	0.145	14.5	**Y**	4.1	0.608	60.8	**Y**	4.3	0.780	78.0	**Y**
85b	541836	199588	woodland	1	2.2	2.2	0.049	4.9	**Y**	2.4	0.209	20.9	**Y**	2.4	0.269	26.9	**Y**
85c	541852	199602	woodland	1	1.9	1.9	0.029	2.9	**Y**	2.0	0.126	12.6	**Y**	2.0	0.163	16.3	**Y**

Table F3: Predicted Annual Mean NH_3 Concentrations across 200m Transects (µg/m^3)																	
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level (µg/m^3)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
85d	541867	199614	woodland	1	1.8	1.8	0.021	2.1	**Y**	1.9	0.093	9.3	**Y**	1.9	0.120	12.0	**Y**
85e	541884	199626	woodland	1	1.7	1.7	0.016	1.6	**Y**	1.8	0.074	7.4	**Y**	1.8	0.095	9.5	**Y**
85f	541899	199638	woodland	1	1.7	1.7	0.013	1.3	**Y**	1.7	0.061	6.1	**Y**	1.7	0.080	8.0	**Y**
85g	541915	199650	woodland	1	1.6	1.6	0.011	1.1	**Y**	1.7	0.052	5.2	**Y**	1.7	0.068	6.8	**Y**
85h	541931	199663	woodland	1	1.6	1.6	0.010	1.0	N	1.7	0.046	4.6	**Y**	1.7	0.060	6.0	**Y**
85i	541945	199675	woodland	1	1.6	1.6	0.009	0.9	N	1.6	0.041	4.1	**Y**	1.7	0.054	5.4	**Y**
85j	5418205	199515	woodland	1	1.5	1.5	0.000	0.0	N	1.5	0.000	0.0	**N**	1.5	0.000	0.0	N
85k	541976	199700	woodland	1	1.6	1.6	0.007	0.7	N	1.6	0.034	3.4	**Y**	1.6	0.045	4.5	**Y**
86a	541639	199713	woodland	1	3.1	3.2	0.117	11.7	**Y**	3.6	0.488	48.8	**Y**	3.7	0.626	62.6	**Y**
86b	541624	199697	woodland	1	2.0	2.0	0.037	3.7	**Y**	2.1	0.158	15.8	**Y**	2.2	0.203	20.3	**Y**
86c	541608	199687	woodland	1	1.8	1.9	0.026	2.6	**Y**	1.9	0.111	11.1	**Y**	2.0	0.143	14.3	**Y**
86d	541594	199674	woodland	1	1.7	1.8	0.020	2.0	**Y**	1.8	0.085	8.5	**Y**	1.9	0.110	11.0	**Y**
86e	541577	199662	woodland	1	1.7	1.7	0.016	1.6	**Y**	1.8	0.070	7.0	**Y**	1.8	0.091	9.1	**Y**
86f	541560	199650	woodland	1	1.7	1.7	0.014	1.4	**Y**	1.7	0.060	6.0	**Y**	1.7	0.078	7.8	**Y**
86g	541543	199638	woodland	1	1.6	1.6	0.012	1.2	**Y**	1.7	0.053	5.3	**Y**	1.7	0.069	6.9	**Y**
86h	541527	199625	woodland	1	1.6	1.6	0.010	1.0	**Y**	1.7	0.047	4.7	**Y**	1.7	0.062	6.2	**Y**

Table F3: Predicted Annual Mean NH_3 Concentrations across 200m Transects (µg/m^3)																
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level (µg/m^3)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
86i	541511	199614	woodland	1	1.6	1.6	0.009	0.9	N	1.6	0.043	4.3	**Y**	1.7	0.057	5.7	**Y**
86j	541496	199603	woodland	1	1.6	1.6	0.009	0.9	N	1.6	0.040	4.0	**Y**	1.6	0.053	5.3	**Y**
86k	541480	199591	woodland	1	1.6	1.6	0.008	0.8	N	1.6	0.037	3.7	**Y**	1.6	0.049	4.9	**Y**
87a	541463	199740	woodland	1	2.9	3.0	0.106	10.6	**Y**	3.4	0.443	44.3	**Y**	3.5	0.568	56.8	**Y**
87b	541463	199760	woodland	1	2.0	2.1	0.041	4.1	**Y**	2.2	0.175	17.5	**Y**	2.3	0.225	22.5	**Y**
87c	541463	199780	woodland	1	1.8	1.8	0.025	2.5	**Y**	1.9	0.108	10.8	**Y**	2.0	0.140	14.0	**Y**
87d	541463	199800	woodland	1	1.7	1.7	0.018	1.8	**Y**	1.8	0.078	7.8	**Y**	1.8	0.101	10.1	**Y**
87e	541463	199820	woodland	1	1.7	1.7	0.014	1.4	**Y**	1.7	0.061	6.1	**Y**	1.7	0.079	7.9	**Y**
87f	541463	199840	woodland	1	1.6	1.6	0.011	1.1	**Y**	1.7	0.050	5.0	**Y**	1.7	0.065	6.5	**Y**
87g	541463	199860	woodland	1	1.6	1.6	0.009	0.9	N	1.6	0.042	4.2	**Y**	1.7	0.055	5.5	**Y**
87h	541463	199880	woodland	1	1.6	1.6	0.008	0.8	N	1.6	0.037	3.7	**Y**	1.6	0.048	4.8	**Y**
87i	541463	199900	woodland	1	1.6	1.6	0.007	0.7	N	1.6	0.032	3.2	**Y**	1.6	0.042	4.2	**Y**
87j	541463	199920	woodland	1	1.6	1.6	0.006	0.6	N	1.6	0.029	2.9	**Y**	1.6	0.038	3.8	**Y**
87k	541463	199940	woodland	1	1.5	1.5	0.006	0.6	N	1.6	0.026	2.6	**Y**	1.6	0.034	3.4	**Y**
88a	541274	199714	woodland	1	3.3	3.5	0.134	13.4	**Y**	3.9	0.558	55.8	**Y**	4.0	0.717	71.7	**Y**
88b	541274	199694	woodland	1	2.0	2.0	0.038	3.8	**Y**	2.2	0.162	16.2	**Y**	2.2	0.210	21.0	**Y**

Table F3: Predicted Annual Mean NH_3 Concentrations across 200m Transects ($\mu g/m^3$)																	
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level ($\mu g/m^3$)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
88c	541274	199674	woodland	1	1.8	1.8	0.022	2.2	**Y**	1.9	0.096	9.6	**Y**	1.9	0.126	12.6	**Y**
88d	541274	199654	woodland	1	1.7	1.7	0.016	1.6	**Y**	1.8	0.069	6.9	**Y**	1.8	0.091	9.1	**Y**
88e	541274	199634	woodland	1	1.6	1.6	0.012	1.2	**Y**	1.7	0.054	5.4	**Y**	1.7	0.072	7.2	**Y**
88f	541274	199614	woodland	1	1.6	1.6	0.010	1.0	N	1.6	0.044	4.4	**Y**	1.7	0.060	6.0	**Y**
88g	541274	199594	woodland	1	1.6	1.6	0.008	0.8	N	1.6	0.037	3.7	**Y**	1.6	0.051	5.1	**Y**
88h	541274	199574	woodland	1	1.6	1.6	0.007	0.7	N	1.6	0.033	3.3	**Y**	1.6	0.045	4.5	**Y**
88i	541274	199554	woodland	1	1.6	1.6	0.006	0.6	N	1.6	0.029	2.9	**Y**	1.6	0.041	4.1	**Y**
88j	541274	199534	woodland	1	1.5	1.5	0.005	0.5	N	1.6	0.026	2.6	**Y**	1.6	0.037	3.7	**Y**
88k	541274	199514	woodland	1	1.5	1.5	0.005	0.5	N	1.6	0.024	2.4	**Y**	1.6	0.034	3.4	**Y**
89a	541190	199701	woodland	1	2.6	2.7	0.082	8.2	**Y**	2.9	0.344	34.4	**Y**	3.0	0.443	44.3	**Y**
89b	541190	199681	woodland	1	1.9	1.9	0.032	3.2	**Y**	2.0	0.135	13.5	**Y**	2.1	0.175	17.5	**Y**
89c	541190	199661	woodland	1	1.7	1.8	0.020	2.0	**Y**	1.8	0.085	8.5	**Y**	1.8	0.111	11.1	**Y**
89d	541190	199641	woodland	1	1.7	1.7	0.014	1.4	**Y**	1.7	0.062	6.2	**Y**	1.7	0.082	8.2	**Y**
89e	541190	199621	woodland	1	1.6	1.6	0.011	1.1	**Y**	1.7	0.049	4.9	**Y**	1.7	0.066	6.6	**Y**
89f	541190	199601	woodland	1	1.6	1.6	0.009	0.9	N	1.6	0.041	4.1	**Y**	1.6	0.055	5.5	**Y**
89g	541190	199581	woodland	1	1.6	1.6	0.008	0.8	N	1.6	0.035	3.5	**Y**	1.6	0.048	4.8	**Y**

Table F3: Predicted Annual Mean NH_3 Concentrations across 200m Transects ($\mu g/m^3$)																
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level ($\mu g/m^3$)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
89h	541190	199561	woodland	1	1.6	1.6	0.006	0.6	N	1.6	0.030	3.0	**Y**	1.6	0.043	4.3	**Y**
89i	541190	199541	woodland	1	1.5	1.5	0.006	0.6	N	1.6	0.027	2.7	**Y**	1.6	0.039	3.9	**Y**
89j	541190	199521	woodland	1	1.5	1.5	0.005	0.5	N	1.6	0.025	2.5	**Y**	1.6	0.036	3.6	**Y**
89k	541190	199501	woodland	1	1.5	1.5	0.005	0.5	N	1.6	0.023	2.3	**Y**	1.6	0.034	3.4	**Y**
90a	541159	199185	woodland	1	1.6	1.6	0.024	2.4	**Y**	1.6	0.082	8.2	**Y**	1.8	0.190	19.0	**Y**
90b	541149	199167	woodland	1	1.5	1.5	0.013	1.3	**Y**	1.6	0.046	4.6	**Y**	1.6	0.103	10.3	**Y**
90c	541138	199150	woodland	1	1.5	1.5	0.009	0.9	N	1.6	0.036	3.6	**Y**	1.6	0.078	7.8	**Y**
90d	541129	199132	woodland	1	1.5	1.5	0.008	0.8	N	1.5	0.030	3.0	**Y**	1.6	0.063	6.3	**Y**
90e	541120	199114	woodland	1	1.5	1.5	0.007	0.7	N	1.5	0.026	2.6	**Y**	1.6	0.055	5.5	**Y**
90f	541111	199097	woodland	1	1.5	1.5	0.006	0.6	N	1.5	0.024	2.4	**Y**	1.6	0.050	5.0	**Y**
90g	541103	199079	woodland	1	1.5	1.5	0.005	0.5	N	1.5	0.022	2.2	**Y**	1.5	0.046	4.6	**Y**
90h	541093	199060	woodland	1	1.5	1.5	0.005	0.5	N	1.5	0.021	2.1	**Y**	1.5	0.043	4.3	**Y**
90i	541082	199043	woodland	1	1.5	1.5	0.005	0.5	N	1.5	0.020	2.0	**Y**	1.5	0.041	4.1	**Y**
90j	541073	199026	woodland	1	1.5	1.5	0.004	0.4	N	1.5	0.019	1.9	**Y**	1.5	0.039	3.9	**Y**
90k	541063	199009	woodland	1	1.5	1.5	0.004	0.4	N	1.5	0.019	1.9	**Y**	1.5	0.037	3.7	**Y**
91a	540942	198962	woodland	1	1.6	1.6	0.028	2.8	Y	1.7	0.094	9.4	**Y**	1.8	0.219	21.9	**Y**

Table F3: Predicted Annual Mean NH_3 Concentrations across 200m Transects ($\mu g/m^3$)																
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level ($\mu g/m^3$)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
91b	540957	198949	woodland	1	1.5	1.5	0.010	1.0	N	1.5	0.036	3.6	**Y**	1.6	0.078	7.8	**Y**
91c	540976	198938	woodland	1	1.5	1.5	0.005	0.5	N	1.5	0.022	2.2	**Y**	1.5	0.046	4.6	**Y**
91d	540992	198926	woodland	1	1.5	1.5	0.004	0.4	N	1.5	0.017	1.7	**Y**	1.5	0.034	3.4	**Y**
91e	541008	198915	woodland	1	1.5	1.5	0.003	0.3	N	1.5	0.015	1.5	**Y**	1.5	0.028	2.8	**Y**
91f	541025	198904	woodland	1	1.5	1.5	0.002	0.2	N	1.5	0.013	1.3	**Y**	1.5	0.024	2.4	**Y**
91g	541040	198893	woodland	1	1.5	1.5	0.002	0.2	N	1.5	0.012	1.2	**Y**	1.5	0.021	2.1	**Y**
91h	541057	198881	woodland	1	1.5	1.5	0.002	0.2	N	1.5	0.011	1.1	**Y**	1.5	0.019	1.9	**Y**
91j	541071	198869	woodland	1	1.5	1.5	0.001	0.1	N	1.5	0.011	1.1	**Y**	1.5	0.018	1.8	**Y**
91i	541090	198857	woodland	1	1.5	1.5	0.001	0.1	N	1.5	0.010	1.0	**Y**	1.5	0.017	1.7	**Y**
91k	541105	198846	woodland	1	1.5	1.5	0.001	0.1	N	1.5	0.010	1.0	**N**	1.5	0.016	1.6	**Y**
93a	541072	197292	woodland	1	2.3	2.3	0.003	0.3	N	2.5	0.198	19.8	**Y**	2.6	0.317	31.7	**Y**
93b	541086	197307	woodland	1	1.8	1.8	-0.001	-0.1	N	1.9	0.081	8.1	**Y**	2.0	0.127	12.7	**Y**
93c	541099	197323	woodland	1	1.7	1.7	-0.002	-0.2	N	1.8	0.057	5.7	**Y**	1.8	0.088	8.8	**Y**
93d	541110	197338	woodland	1	1.7	1.7	-0.002	-0.2	N	1.8	0.048	4.8	**Y**	1.8	0.073	7.3	**Y**
93e	541122	197355	woodland	1	1.7	1.7	-0.003	-0.3	N	1.7	0.043	4.3	**Y**	1.8	0.064	6.4	**Y**
93f	5441133	197371	woodland	1	1.5	1.5	0.000	0.0	N	1.5	0.000	0.0	**N**	1.5	0.000	0.0	N

Table F3: Predicted Annual Mean NH_3 Concentrations across 200m Transects (µg/m^3)																	
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level (µg/m^3)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
93g	541144	197389	woodland	1	1.7	1.7	-0.003	-0.3	N	1.7	0.038	3.8	**Y**	1.7	0.056	5.6	**Y**
93h	541154	197406	woodland	1	1.7	1.7	-0.003	-0.3	N	1.7	0.036	3.6	**Y**	1.7	0.054	5.4	**Y**
93i	541164	197424	woodland	1	1.7	1.7	-0.004	-0.4	N	1.7	0.035	3.5	**Y**	1.7	0.052	5.2	**Y**
93j	541173	197443	woodland	1	1.7	1.7	-0.004	-0.4	N	1.7	0.035	3.5	**Y**	1.7	0.051	5.1	**Y**
93k	541181	197461	woodland	1	1.7	1.7	-0.004	-0.4	N	1.7	0.034	3.4	**Y**	1.7	0.050	5.0	**Y**
94a	541039	197304	heathland	1	2.2	2.2	0.003	0.3	N	2.4	0.170	17.0	**Y**	2.5	0.273	27.3	**Y**
94b	541023	197291	heathland	1	1.7	1.7	-0.001	-0.1	N	1.8	0.057	5.7	**Y**	1.8	0.089	8.9	**Y**
94c	541010	197276	heathland	1	1.7	1.7	-0.001	-0.1	N	1.7	0.039	3.9	**Y**	1.7	0.060	6.0	**Y**
94d	540997	197261	heathland	1	1.6	1.6	-0.001	-0.1	N	1.6	0.031	3.1	**Y**	1.7	0.047	4.7	**Y**
94e	540983	197246	heathland	1	1.6	1.6	-0.002	-0.2	N	1.6	0.026	2.6	**Y**	1.6	0.039	3.9	**Y**
94f	540969	197232	heathland	1	1.6	1.6	-0.002	-0.2	N	1.6	0.023	2.3	**Y**	1.6	0.034	3.4	**Y**
94g	540957	197218	heathland	1	1.6	1.6	-0.002	-0.2	N	1.6	0.021	2.1	**Y**	1.6	0.031	3.1	**Y**
94h	540942	197203	heathland	1	1.6	1.6	-0.001	-0.1	N	1.6	0.019	1.9	**Y**	1.6	0.028	2.8	**Y**
94i	540927	197188	heathland	1	1.6	1.6	-0.001	-0.1	N	1.6	0.018	1.8	**Y**	1.6	0.026	2.6	**Y**
94j	540912	197173	heathland	1	1.6	1.5	-0.001	-0.1	N	1.6	0.016	1.6	**Y**	1.6	0.024	2.4	**Y**
94k	540898	197159	heathland	1	1.5	1.5	-0.001	-0.1	N	1.6	0.015	1.5	**Y**	1.6	0.022	2.2	**Y**

Table F3: Predicted Annual Mean NH_3 Concentrations across 200m Transects ($\mu g/m^3$)																	
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level ($\mu g/m^3$)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
95a	540988	197442	woodland	1	2.3	2.3	0.004	0.4	N	2.5	0.192	19.2	**Y**	2.6	0.308	30.8	**Y**
95b	541008	197442	woodland	1	1.8	1.8	0.001	0.1	N	1.9	0.077	7.7	**Y**	1.9	0.122	12.2	**Y**
95c	541028	197442	woodland	1	1.7	1.7	0.000	0.0	N	1.8	0.052	5.2	**Y**	1.8	0.081	8.1	**Y**
95d	541048	197442	woodland	1	1.7	1.7	-0.001	-0.1	N	1.7	0.042	4.2	**Y**	1.7	0.064	6.4	**Y**
95e	541068	197442	woodland	1	1.6	1.6	-0.001	-0.1	N	1.7	0.036	3.6	**Y**	1.7	0.055	5.5	**Y**
95f	541088	197442	woodland	1	1.6	1.6	-0.002	-0.2	N	1.7	0.033	3.3	**Y**	1.7	0.051	5.1	**Y**
95g	541108	197442	woodland	1	1.6	1.6	-0.002	-0.2	N	1.7	0.032	3.2	**Y**	1.7	0.048	4.8	**Y**
95h	541128	197442	woodland	1	1.6	1.6	-0.002	-0.2	N	1.7	0.032	3.2	**Y**	1.7	0.047	4.7	**Y**
95i	541148	197442	woodland	1	1.6	1.6	-0.003	-0.3	N	1.7	0.032	3.2	**Y**	1.7	0.048	4.8	**Y**
95j	541168	197442	woodland	1	1.7	1.7	-0.003	-0.3	N	1.7	0.034	3.4	**Y**	1.7	0.050	5.0	**Y**
95k	541188	197442	woodland	1	1.7	1.7	-0.004	-0.4	N	1.7	0.037	3.7	**Y**	1.7	0.054	5.4	**Y**
97a	540790	197752	woodland	1	2.5	2.5	0.007	0.7	N	2.8	0.253	25.3	**Y**	2.9	0.409	40.9	**Y**
97b	540808	197762	woodland	1	1.8	1.8	0.002	0.2	N	1.9	0.077	7.7	**Y**	1.9	0.123	12.3	**Y**
97c	540825	197772	woodland	1	1.7	1.7	0.001	0.1	N	1.7	0.048	4.8	**Y**	1.7	0.076	7.6	**Y**
97d	540843	197782	woodland	1	1.6	1.6	0.000	0.0	N	1.7	0.036	3.6	**Y**	1.7	0.056	5.6	**Y**
97e	540861	197791	woodland	1	1.6	1.6	0.000	0.0	N	1.6	0.029	2.9	**Y**	1.6	0.045	4.5	**Y**

Table F3: Predicted Annual Mean NH_3 Concentrations across 200m Transects ($\mu g/m^3$)																
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level ($\mu g/m^3$)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
97f	540879	197801	woodland	1	1.6	1.6	0.000	0.0	N	1.6	0.025	2.5	**Y**	1.6	0.039	3.9	**Y**
97g	540895	197812	woodland	1	1.6	1.6	0.000	0.0	N	1.6	0.022	2.2	**Y**	1.6	0.034	3.4	**Y**
97h	540912	197821	woodland	1	1.6	1.6	0.000	0.0	N	1.6	0.020	2.0	**Y**	1.6	0.031	3.1	**Y**
97i	540931	197832	woodland	1	1.5	1.5	0.000	0.0	N	1.6	0.019	1.9	**Y**	1.6	0.028	2.8	**Y**
97j	840948	197840	woodland	1	1.5	1.5	0.000	0.0	N	1.5	0.000	0.0	N	1.5	0.000	0.0	N
97k	540966	197850	woodland	1	1.5	1.5	0.000	0.0	N	1.6	0.017	1.7	**Y**	1.6	0.025	2.5	**Y**
98a	540683	197838	woodland	1	2.2	2.3	0.005	0.5	N	2.4	0.190	19.0	**Y**	2.6	0.305	30.5	**Y**
98b	540668	197822	woodland	1	1.7	1.7	0.001	0.1	N	1.7	0.052	5.2	**Y**	1.8	0.082	8.2	**Y**
98c	540655	197807	woodland	1	1.6	1.6	0.000	0.0	N	1.6	0.033	3.3	**Y**	1.6	0.051	5.1	**Y**
98d	540642	197792	woodland	1	1.6	1.6	0.000	0.0	N	1.6	0.024	2.4	**Y**	1.6	0.038	3.8	**Y**
98e	540631	197778	woodland	1	1.5	1.5	0.000	0.0	N	1.6	0.020	2.0	**Y**	1.6	0.031	3.1	**Y**
98f	540617	197761	woodland	1	1.5	1.5	0.000	0.0	N	1.5	0.017	1.7	**Y**	1.6	0.026	2.6	**Y**
98g	540605	197746	woodland	1	1.5	1.5	0.000	0.0	N	1.5	0.015	1.5	**Y**	1.5	0.023	2.3	**Y**
98h	540592	197730	woodland	1	1.5	1.5	0.000	0.0	N	1.5	0.014	1.4	**Y**	1.5	0.021	2.1	**Y**
98i	540579	197715	woodland	1	1.5	1.5	0.000	0.0	N	1.5	0.012	1.2	**Y**	1.5	0.019	1.9	**Y**
98j	540567	197700	woodland	1	1.5	1.5	0.000	0.0	N	1.5	0.012	1.2	**Y**	1.5	0.017	1.7	**Y**

Table F3: Predicted Annual Mean NH_3 Concentrations across 200m Transects (µg/m^3)																
	Receptor Location				2019	2021				2031				2041			
Receptor Number	X	Y	Habitat Type	Critical Level (µg/m^3)	Total NH_3[1]	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	Total NH_3[1]	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
98k	540553	197684	woodland	1	1.5	1.5	0.000	0.0	N	1.5	0.011	1.1	**Y**	1.5	0.016	1.6	**Y**
99a	540693	197845	woodland	1	2.2	2.3	0.005	0.5	N	2.4	0.190	19.0	**Y**	2.6	0.306	30.6	**Y**
99b	540706	197860	woodland	1	1.7	1.7	0.002	0.2	N	1.8	0.068	6.8	**Y**	1.9	0.109	10.9	**Y**
99c	540719	197876	woodland	1	1.6	1.6	0.001	0.1	N	1.7	0.042	4.2	**Y**	1.7	0.067	6.7	**Y**
99d	540734	197890	woodland	1	1.6	1.6	0.000	0.0	N	1.6	0.032	3.2	**Y**	1.6	0.050	5.0	**Y**
99e	540748	197905	woodland	1	1.6	1.6	0.000	0.0	N	1.6	0.026	2.6	**Y**	1.6	0.040	4.0	**Y**
99f	540762	197919	woodland	1	1.6	1.6	0.000	0.0	N	1.6	0.022	2.2	**Y**	1.6	0.034	3.4	**Y**
99g	540773	197934	woodland	1	1.5	1.5	0.000	0.0	N	1.6	0.019	1.9	**Y**	1.6	0.030	3.0	**Y**
99h	540788	197952	woodland	1	1.5	1.5	0.000	0.0	N	1.6	0.017	1.7	Y	1.6	0.026	2.6	Y
99i	540798	197967	woodland	1	1.5	1.5	0.000	0.0	N	1.5	0.016	1.6	Y	1.6	0.024	2.4	Y

Table F4: Predicted Nutrient Nitrogen Deposition (kg/ha/yr)																
		2019 Base			2021						2031					
Receptor Number	CLO	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
1	10	0.6	3.4	42.2	0.5	3.6	42.3	0.043	0.4	N	0.2	4.3	42.7	0.464	4.6	**Y**
2	10	0.3	1.7	40.2	0.3	1.8	40.3	0.019	0.2	N	0.1	2.1	40.5	0.225	2.3	**Y**
3	10	3.4	4.5	46.1	2.7	4.4	45.3	-0.752	-7.5	N	1.2	5.1	44.5	-1.562	-15.6	N
4	10	8.3	13.8	60.3	6.9	13.5	58.6	-1.789	-17.9	N	3.2	15.7	57.0	-3.332	-33.3	N
5	10	10.5	20.9	69.6	8.8	20.4	67.4	-2.244	-22.4	N	4.1	23.7	66.0	-3.629	-36.3	N
6	10	5.4	9.9	53.6	4.5	9.7	52.4	-1.197	-12.0	N	2.0	11.3	51.5	-2.096	-21.0	N
7	10	10.5	20.9	69.6	8.8	20.3	67.3	-2.236	-22.4	N	4.1	23.7	65.9	-3.622	-36.2	N
8	10	6.4	11.7	56.3	5.3	11.4	54.9	-1.386	-13.9	N	2.4	13.3	53.9	-2.414	-24.1	N
9	10	11.4	20.2	69.8	9.5	19.7	67.4	-2.401	-24.0	N	4.5	22.9	65.6	-4.274	-42.7	N
10	10	8.1	13.5	59.7	6.7	13.1	58.0	-1.711	-17.1	N	3.0	15.3	56.5	-3.189	-31.9	N
11	10	7.7	13.2	83.1	6.4	12.9	81.5	-1.601	-16.0	N	2.9	15.0	80.1	-2.947	-29.5	N
12	10	10.6	18.5	67.3	8.8	18.0	65.1	-2.216	-22.2	N	4.1	21.0	63.3	-4.013	-40.1	N
13	10	11.3	18.2	91.7	9.5	18.1	89.8	-1.901	-19.0	N	4.5	21.0	87.6	-4.040	-40.4	N
14	10	6.2	11.3	79.7	5.2	11.3	78.6	-1.092	-10.9	N	2.3	13.0	77.5	-2.254	-22.5	N
15	10	7.8	16.4	86.4	6.5	16.5	85.2	-1.253	-12.5	N	2.9	18.9	84.0	-2.469	-24.7	N
16	10	1.4	2.5	66.1	1.2	2.6	66.0	-0.172	-1.7	N	0.5	3.0	65.7	-0.452	-4.5	N

Table F4: Predicted Nutrient Nitrogen Deposition (kg/ha/yr)																
		2019 Base			2021						2031					
Receptor Number	CLO	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
17	10	7.7	16.8	86.7	6.4	16.9	85.6	-1.184	-11.8	N	2.8	19.4	84.4	-2.328	-23.3	N
18	10	11.8	27.7	101.7	9.9	27.8	99.9	-1.752	-17.5	N	4.4	31.9	98.5	-3.198	-32.0	N
19	10	15.9	39.5	117.7	13.4	39.8	115.3	-2.317	-23.2	N	6.1	45.5	113.8	-3.820	-38.2	N
20	10	15.2	37.4	114.8	12.8	37.6	112.6	-2.213	-22.1	N	5.8	43.0	111.1	-3.720	-37.2	N
21	10	9.7	21.8	93.7	8.1	21.9	92.2	-1.455	-14.6	N	3.6	25.1	90.9	-2.751	-27.5	N
22	10	7.0	14.0	83.2	5.8	14.0	82.1	-1.171	-11.7	N	2.6	16.1	80.9	-2.344	-23.4	N
23	10	9.0	14.5	85.7	7.4	14.3	83.9	-1.791	-17.9	N	3.4	16.6	82.2	-3.525	-35.3	N
24	10	8.1	16.0	86.3	6.8	15.7	84.6	-1.692	-16.9	N	3.1	18.2	83.5	-2.814	-28.1	N
25	10	1.9	3.4	67.5	1.5	3.4	67.1	-0.371	-3.7	N	0.7	3.9	66.7	-0.710	-7.1	N
26	10	8.6	16.6	87.3	7.1	16.2	85.5	-1.824	-18.2	N	3.3	18.8	84.3	-3.074	-30.7	N
27	10	8.4	16.1	86.6	7.0	15.7	84.8	-1.791	-17.9	N	3.2	18.2	83.6	-3.016	-30.2	N
28	10	6.2	11.3	79.6	5.3	11.3	78.8	-0.819	-8.2	N	2.3	12.9	77.5	-2.147	-21.5	N
29	10	0.5	0.8	33.5	0.4	0.8	33.4	-0.102	-1.0	N	0.2	0.9	33.3	-0.213	-2.1	N
30	10	10.7	17.3	60.2	8.9	17.1	58.2	-2.005	-20.1	N	4.2	19.9	56.3	-3.889	-38.9	N
31	10	7.3	11.0	50.5	6.1	10.9	49.3	-1.249	-12.5	N	2.8	12.8	47.8	-2.678	-26.8	N
32	10	10.4	20.1	62.6	8.7	19.6	60.5	-2.173	-21.7	N	4.0	22.8	59.0	-3.617	-36.2	N
33	10	8.3	13.4	53.9	6.9	13.1	52.2	-1.708	-17.1	N	3.1	15.3	50.7	-3.254	-32.5	N

Table F4: Predicted Nutrient Nitrogen Deposition (kg/ha/yr)																
		2019 Base			2021						2031					
Receptor Number	CLO	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
34	10	8.2	15.4	55.8	6.8	15.0	54.1	-1.748	-17.5	N	3.1	17.5	52.8	-2.994	-29.9	N
35	10	6.0	10.8	49.0	5.1	11.0	48.3	-0.740	-7.4	N	2.3	13.0	47.5	-1.548	-15.5	N
36	10	4.9	8.7	45.9	4.2	8.9	45.2	-0.624	-6.2	N	1.9	10.5	44.5	-1.323	-13.2	N
37	10	6.3	11.4	49.8	5.3	11.6	49.1	-0.757	-7.6	N	2.4	13.6	48.2	-1.579	-15.8	N
38	10	4.8	8.5	45.5	4.1	8.7	44.9	-0.608	-6.1	N	1.8	10.2	44.3	-1.288	-12.9	N
39	10	1.3	2.0	35.5	1.0	2.0	35.2	-0.240	-2.4	N	0.4	2.3	35.0	-0.486	-4.9	N
40	10	0.9	1.5	34.7	0.8	1.5	34.5	-0.181	-1.8	N	0.3	1.8	34.3	-0.362	-3.6	N
41	10	5.0	8.9	46.1	4.2	9.1	45.5	-0.620	-6.2	N	1.9	10.7	44.8	-1.315	-13.2	N
42	10	6.2	11.2	79.6	5.3	11.4	78.9	-0.741	-7.4	N	2.4	13.5	78.1	-1.551	-15.5	N
43	10	6.3	11.4	79.9	5.3	11.7	79.2	-0.749	-7.5	N	2.4	13.7	78.4	-1.567	-15.7	N
44	10	2.6	6.6	41.4	2.2	6.6	41.0	-0.405	-4.1	N	1.0	7.7	40.9	-0.460	-4.6	N
45	10	2.7	6.9	25.8	2.3	6.9	25.3	-0.412	-4.1	N	1.0	8.1	25.3	-0.464	-4.6	N
46	10	5.2	14.3	37.9	4.4	14.0	36.6	-1.211	-12.1	N	2.0	16.3	36.6	-1.283	-12.8	N
47	10	7.1	13.9	53.3	5.9	13.6	51.7	-1.564	-15.6	N	2.7	15.8	50.7	-2.604	-26.0	N
48	10	7.6	14.7	49.9	6.3	14.4	48.3	-1.640	-16.4	N	2.8	16.7	47.1	-2.779	-27.8	N
49	10	1.0	2.4	19.5	0.8	2.3	19.2	-0.234	-2.3	N	0.4	2.7	19.1	-0.328	-3.3	N
50	10	7.5	13.4	48.5	6.2	13.2	47.0	-1.528	-15.3	N	2.8	15.0	45.4	-3.115	-31.2	N

Table F4: Predicted Nutrient Nitrogen Deposition (kg/ha/yr)																
		2019 Base			2021						2031					
Receptor Number	CLO	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
51	10	4.2	7.2	39.0	3.4	7.3	38.3	-0.677	-6.8	N	1.4	7.9	36.9	-2.047	-20.5	N
52	10	3.6	6.2	37.4	3.0	6.3	36.9	-0.587	-5.9	N	1.2	6.8	35.6	-1.795	-17.9	N
53	10	8.8	16.2	52.6	7.4	15.9	50.8	-1.785	-17.8	N	3.3	18.2	49.1	-3.527	-35.3	N
54	10	8.1	15.5	51.1	6.7	15.1	49.4	-1.708	-17.1	N	3.0	17.5	48.1	-3.029	-30.3	N
55	10	7.9	15.6	51.1	6.6	15.2	49.3	-1.725	-17.3	N	3.0	17.6	48.2	-2.857	-28.6	N
56	10	9.1	18.2	54.9	7.6	17.8	52.9	-1.968	-19.7	N	3.5	20.7	51.7	-3.180	-31.8	N
57	10	4.5	12.1	32.7	3.8	11.8	31.7	-1.058	-10.6	N	1.7	13.7	31.5	-1.180	-11.8	N
58	10	4.9	13.1	34.1	4.1	12.8	32.9	-1.131	-11.3	N	1.9	14.8	32.8	-1.242	-12.4	N
59	10	4.3	11.4	31.8	3.6	11.1	30.8	-1.011	-10.1	N	1.6	12.9	30.7	-1.148	-11.5	N
60	10	5.2	14.0	35.3	4.3	13.7	34.1	-1.210	-12.1	N	2.0	15.9	34.0	-1.317	-13.2	N
61	10	3.9	10.0	29.9	3.2	9.7	29.0	-0.915	-9.1	N	1.4	11.3	28.9	-1.080	-10.8	N
62	10	5.3	14.4	35.8	4.4	14.0	34.5	-1.237	-12.4	N	2.0	16.3	34.4	-1.341	-13.4	N
63	10	3.3	6.1	25.5	2.7	5.9	24.7	-0.760	-7.6	N	1.2	6.9	24.2	-1.266	-12.7	N
64	10	2.9	5.1	24.1	2.3	5.0	23.5	-0.631	-6.3	N	1.1	5.9	23.1	-1.032	-10.3	N
65	10	13.9	21.0	62.5	11.6	20.5	59.6	-2.901	-29.0	N	5.5	23.9	56.9	-5.626	-56.3	N
66	10	11.2	22.8	61.6	9.4	22.2	59.2	-2.403	-24.0	N	4.4	25.9	57.8	-3.797	-38.0	N
67	10	10.8	22.0	60.5	9.1	21.5	58.1	-2.331	-23.3	N	4.2	25.0	56.8	-3.696	-37.0	N

Table F4: Predicted Nutrient Nitrogen Deposition (kg/ha/yr)																
		2019 Base			2021						2031					
Receptor Number	CLO	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
68	10	4.8	12.9	33.8	4.0	12.5	32.6	-1.122	-11.2	N	1.8	14.6	32.5	-1.250	-12.5	N
69	10	5.9	16.1	38.1	4.9	15.7	36.8	-1.357	-13.6	N	2.3	18.3	36.7	-1.416	-14.2	N
70	10	4.6	12.3	33.1	3.9	12.0	32.0	-1.061	-10.6	N	1.8	14.0	31.9	-1.173	-11.7	N
71	10	4.7	8.8	29.6	3.9	8.9	28.8	-0.758	-7.6	N	1.8	10.4	28.4	-1.240	-12.4	N
72	10	5.0	9.8	30.9	4.2	9.7	30.0	-0.968	-9.7	N	2.0	11.3	29.4	-1.549	-15.5	N
73	10	4.3	8.3	28.7	3.6	8.2	28.0	-0.732	-7.3	N	1.7	9.7	27.5	-1.226	-12.3	N
74	10	2.5	5.9	24.5	2.1	5.9	24.1	-0.411	-4.1	N	1.0	6.9	24.0	-0.538	-5.4	N
75	10	3.9	9.5	29.5	3.3	9.5	28.9	-0.586	-5.9	N	1.5	11.2	28.8	-0.695	-7.0	N
76	10	2.5	5.8	24.5	2.1	5.8	24.1	-0.395	-3.9	N	0.9	6.9	23.9	-0.522	-5.2	N
77	10	3.2	7.6	26.9	2.7	7.6	26.4	-0.485	-4.9	N	1.2	8.9	26.2	-0.613	-6.1	N
78	10	3.9	6.6	38.0	3.2	6.6	37.4	-0.616	-6.2	N	1.4	7.8	36.8	-1.237	-12.4	N
79	10	5.6	11.0	32.7	4.7	10.8	31.6	-1.107	-11.1	N	2.2	12.7	31.0	-1.746	-17.5	N
80	10	4.0	10.4	30.5	3.4	10.1	29.6	-0.925	-9.3	N	1.5	11.8	29.4	-1.080	-10.8	N
81	10	7.6	14.7	49.8	6.3	14.3	48.2	-1.633	-16.3	N	2.9	16.6	47.1	-2.722	-27.2	N
82	10	6.5	9.6	43.7	5.5	10.2	43.2	-0.482	-4.8	N	2.6	12.2	42.4	-1.316	-13.2	N
83	10	8.4	13.2	49.2	7.2	14.1	48.9	-0.331	-3.3	N	3.4	17.0	48.0	-1.140	-11.4	N
84	10	7.6	11.7	46.9	6.5	12.5	46.6	-0.306	-3.1	N	3.1	15.2	45.8	-1.075	-10.7	N

Table F4: Predicted Nutrient Nitrogen Deposition (kg/ha/yr)																
		2019 Base			2021						2031					
Receptor Number	CLO	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
85	10	9.9	16.0	53.5	8.5	17.1	53.2	-0.259	-2.6	N	4.1	20.7	52.4	-1.060	-10.6	N
86	10	8.2	12.8	48.6	7.0	13.7	48.3	-0.274	-2.7	N	3.3	16.6	47.5	-1.048	-10.5	N
87	10	7.5	11.6	46.7	6.4	12.4	46.4	-0.261	-2.6	N	3.0	15.0	45.7	-1.011	-10.1	N
88	10	9.2	14.6	51.4	7.9	15.6	51.1	-0.263	-2.6	N	3.8	18.9	50.3	-1.055	-10.6	N
89	10	6.0	9.0	42.6	5.1	9.7	42.4	-0.244	-2.4	N	2.4	11.7	41.7	-0.909	-9.1	N
90	10	0.7	0.9	29.2	0.7	1.1	29.3	0.123	1.2	Y	0.4	1.5	29.5	0.267	2.7	**Y**
91	10	0.6	0.9	29.1	0.6	1.2	29.3	0.191	1.9	Y	0.3	1.7	29.6	0.436	4.4	**Y**
92	10	6.5	8.7	42.8	5.3	8.6	41.5	-1.317	-13.2	N	2.4	10.2	40.2	-2.584	-25.8	N
93	10	4.1	6.8	38.5	3.4	6.9	37.8	-0.651	-6.5	N	1.6	8.4	37.6	-0.938	-9.4	N
94	10	1.7	5.9	23.7	1.5	3.9	21.5	-2.229	-22.3	N	0.7	4.8	21.6	-2.138	-21.4	N
95	10	3.8	6.4	37.8	3.2	6.5	37.2	-0.571	-5.7	N	1.5	7.9	37.0	-0.807	-8.1	N
96	10	2.7	4.5	34.8	2.2	4.5	34.4	-0.416	-4.2	N	1.0	5.6	34.2	-0.602	-6.0	N
97	10	4.8	8.3	40.7	4.0	8.4	40.0	-0.695	-6.9	N	1.9	10.3	39.8	-0.921	-9.2	N
98	10	3.6	6.2	37.5	3.1	6.3	36.9	-0.542	-5.4	N	1.4	7.7	36.7	-0.751	-7.5	N
99	10	3.7	6.2	37.5	3.1	6.3	36.9	-0.542	-5.4	N	1.4	7.7	36.7	-0.746	-7.5	N
100	10	0.4	0.6	63.2	0.3	0.6	63.1	-0.095	-0.9	N	0.1	0.7	63.0	-0.144	-1.4	N
101	10	0.4	0.6	63.2	0.3	0.6	63.1	-0.100	-1.0	N	0.2	0.7	63.1	-0.149	-1.5	N

Table F4: Predicted Nutrient Nitrogen Deposition (kg/ha/yr)															
		2019 Base			2021						2031					
Receptor Number	CLO	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
102	10	0.2	0.4	31.0	0.2	0.4	31.0	-0.021	-0.2	N	0.1	0.5	31.0	-0.021	-0.2	N
103	10	0.3	0.5	31.2	0.3	0.5	31.1	-0.020	-0.2	N	0.1	0.6	31.1	-0.018	-0.2	N

Table F5: Predicted Annual Mean NH_3 Concentrations in 2041 (µg/m^3)										
		2019 Base			2041					
Receptor Number	CLO	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
1	10	0.6	3.4	42.2	0.2	4.4	42.8	0.617	6.2	**Y**
2	10	0.3	1.7	40.2	0.1	2.2	40.5	0.303	3.0	**Y**
3	10	3.4	4.5	46.1	1.3	5.3	44.8	-1.268	-12.7	N
4	10	8.3	13.8	60.3	3.3	16.4	57.9	-2.442	-24.4	N
5	10	10.5	20.9	69.6	4.3	24.8	67.3	-2.319	-23.2	N
6	10	5.4	9.9	53.6	2.1	11.8	52.1	-1.465	-14.7	N
7	10	10.5	20.9	69.6	4.3	24.8	67.2	-2.318	-23.2	N
8	10	6.4	11.7	56.3	2.5	13.9	54.6	-1.674	-16.7	N

Table F5: Predicted Annual Mean NH_3 Concentrations in 2041 (µg/m^3)										
		2019 Base			2041					
Receptor Number	CLO	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
9	10	11.4	20.2	69.8	4.6	24.0	66.8	-3.000	-30.0	N
10	10	8.1	13.5	59.7	3.2	16.0	57.4	-2.338	-23.4	N
11	10	7.7	13.2	83.1	3.1	15.7	80.9	-2.130	-21.3	N
12	10	10.6	18.5	67.3	4.3	22.0	64.5	-2.855	-28.6	N
13	10	11.3	18.2	91.7	4.6	21.8	88.7	-3.000	-30.0	N
14	10	6.2	11.3	79.7	2.4	13.3	77.8	-1.909	-19.1	N
15	10	7.8	16.4	86.4	2.9	19.1	84.2	-2.212	-22.1	N
16	10	1.4	2.5	66.1	0.5	3.1	65.8	-0.377	-3.8	N
17	10	7.7	16.8	86.7	2.9	19.5	84.6	-2.147	-21.5	N
18	10	11.8	27.7	101.7	4.5	32.0	98.7	-2.951	-29.5	N
19	10	15.9	39.5	117.7	6.2	45.8	114.2	-3.489	-34.9	N
20	10	15.2	37.4	114.8	5.9	43.3	111.4	-3.400	-34.0	N
21	10	9.7	21.8	93.7	3.7	25.3	91.1	-2.526	-25.3	N
22	10	7.0	14.0	83.2	2.6	16.3	81.2	-2.065	-20.6	N
23	10	9.0	14.5	85.7	3.6	17.2	82.9	-2.779	-27.8	N
24	10	8.1	16.0	86.3	3.3	19.0	84.5	-1.879	-18.8	N
25	10	1.9	3.4	67.5	0.7	4.0	66.9	-0.564	-5.6	N

Table F5: Predicted Annual Mean NH_3 Concentrations in 2041 (µg/m^3)										
		2019 Base			2041					
Receptor Number	CLO	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
26	10	8.6	16.6	87.3	3.4	19.7	85.3	-2.072	-20.7	N
27	10	8.4	16.1	86.6	3.3	19.1	84.6	-2.026	-20.3	N
28	10	6.2	11.3	79.6	2.4	13.5	78.1	-1.538	-15.4	N
29	10	0.5	0.8	33.5	0.2	1.0	33.4	-0.169	-1.7	N
30	10	10.7	17.3	60.2	4.3	20.8	57.3	-2.918	-29.2	N
31	10	7.3	11.0	50.5	2.9	13.3	48.3	-2.152	-21.5	N
32	10	10.4	20.1	62.6	4.2	23.9	60.3	-2.383	-23.8	N
33	10	8.3	13.4	53.9	3.3	16.0	51.5	-2.425	-24.3	N
34	10	8.2	15.4	55.8	3.3	18.3	53.8	-2.038	-20.4	N
35	10	6.0	10.8	49.0	2.4	13.4	47.9	-1.114	-11.1	N
36	10	4.9	8.7	45.9	1.9	10.8	44.9	-0.971	-9.7	N
37	10	6.3	11.4	49.8	2.5	14.0	48.7	-1.126	-11.3	N
38	10	4.8	8.5	45.5	1.9	10.5	44.6	-0.947	-9.5	N
39	10	1.3	2.0	35.5	0.5	2.4	35.1	-0.382	-3.8	N
40	10	0.9	1.5	34.7	0.4	1.8	34.4	-0.281	-2.8	N
41	10	5.0	8.9	46.1	2.0	11.0	45.2	-0.963	-9.6	N
42	10	6.2	11.2	79.6	2.5	13.9	78.5	-1.108	-11.1	N

Table F5: Predicted Annual Mean NH_3 Concentrations in 2041 (µg/m^3)										
		2019 Base			2041					
Receptor Number	CLO	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
43	10	6.3	11.4	79.9	2.5	14.1	78.8	-1.116	-11.2	N
44	10	2.6	6.6	41.4	1.0	8.0	41.2	-0.191	-1.9	N
45	10	2.7	6.9	25.8	1.1	8.4	25.6	-0.182	-1.8	N
46	10	5.2	14.3	37.9	2.1	17.0	37.4	-0.418	-4.2	N
47	10	7.1	13.9	53.3	2.8	16.5	51.5	-1.731	-17.3	N
48	10	7.6	14.7	49.9	3.0	17.5	48.1	-1.871	-18.7	N
49	10	1.0	2.4	19.5	0.4	2.8	19.3	-0.190	-1.9	N
50	10	7.5	13.4	48.5	2.9	15.6	46.1	-2.413	-24.1	N
51	10	4.2	7.2	39.0	1.5	8.0	37.1	-1.876	-18.8	N
52	10	3.6	6.2	37.4	1.3	6.9	35.8	-1.651	-16.5	N
53	10	8.8	16.2	52.6	3.4	18.9	50.0	-2.661	-26.6	N
54	10	8.1	15.5	51.1	3.2	18.3	49.0	-2.112	-21.1	N
55	10	7.9	15.6	51.1	3.1	18.5	49.2	-1.881	-18.8	N
56	10	9.1	18.2	54.9	3.6	21.6	52.9	-2.037	-20.4	N
57	10	4.5	12.1	32.7	1.8	14.4	32.3	-0.444	-4.4	N
58	10	4.9	13.1	34.1	1.9	15.6	33.6	-0.447	-4.5	N
59	10	4.3	11.4	31.8	1.7	13.5	31.4	-0.453	-4.5	N

Table F5: Predicted Annual Mean NH_3 Concentrations in 2041 (µg/m^3)										
		2019 Base			2041					
Receptor Number	CLO	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
60	10	5.2	14.0	35.3	2.1	16.7	34.8	-0.465	-4.7	N
61	10	3.9	10.0	29.9	1.5	11.9	29.5	-0.467	-4.7	N
62	10	5.3	14.4	35.8	2.1	17.1	35.3	-0.466	-4.7	N
63	10	3.3	6.1	25.5	1.3	7.3	24.6	-0.849	-8.5	N
64	10	2.9	5.1	24.1	1.1	6.3	23.5	-0.607	-6.1	N
65	10	13.9	21.0	62.5	5.7	25.1	58.3	-4.194	-41.9	N
66	10	11.2	22.8	61.6	4.5	27.1	59.3	-2.346	-23.5	N
67	10	10.8	22.0	60.5	4.4	26.2	58.1	-2.305	-23.0	N
68	10	4.8	12.9	33.8	1.9	15.3	33.3	-0.464	-4.6	N
69	10	5.9	16.1	38.1	2.4	19.2	37.7	-0.433	-4.3	N
70	10	4.6	12.3	33.1	1.9	14.7	32.7	-0.415	-4.2	N
71	10	4.7	8.8	29.6	1.9	11.0	29.0	-0.611	-6.1	N
72	10	5.0	9.8	30.9	2.0	11.9	30.0	-0.937	-9.4	N
73	10	4.3	8.3	28.7	1.7	10.1	27.9	-0.790	-7.9	N
74	10	2.5	5.9	24.5	1.0	7.1	24.2	-0.267	-2.7	N
75	10	3.9	9.5	29.5	1.6	11.5	29.2	-0.301	-3.0	N
76	10	2.5	5.8	24.5	1.0	7.1	24.2	-0.278	-2.8	N

Table F5: Predicted Annual Mean NH_3 Concentrations in 2041 (µg/m^3)										
		2019 Base			2041					
Receptor Number	CLO	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
77	10	3.2	7.6	26.9	1.3	9.2	26.6	-0.302	-3.0	N
78	10	3.9	6.6	38.0	1.5	8.0	37.1	-0.953	-9.5	N
79	10	5.6	11.0	32.7	2.3	13.3	31.7	-1.035	-10.3	N
80	10	4.0	10.4	30.5	1.6	12.4	30.1	-0.438	-4.4	N
81	10	7.6	14.7	49.8	3.0	17.5	48.1	-1.788	-17.9	N
82	10	6.5	9.6	43.7	2.7	13.0	43.4	-0.345	-3.4	N
83	10	8.4	13.2	49.2	3.7	18.1	49.4	0.168	1.7	**Y**
84	10	7.6	11.7	46.9	3.3	16.1	47.0	0.092	0.9	N
85	10	9.9	16.0	53.5	4.4	22.1	54.0	0.539	5.4	**Y**
86	10	8.2	12.8	48.6	3.5	17.7	48.8	0.237	2.4	**Y**
87	10	7.5	11.6	46.7	3.2	16.0	46.9	0.164	1.6	**Y**
88	10	9.2	14.6	51.4	4.0	20.2	51.8	0.425	4.2	**Y**
89	10	6.0	9.0	42.6	2.6	12.5	42.6	0.016	0.2	N
90	10	0.7	0.9	29.2	0.6	2.4	30.5	1.312	13.1	**Y**
91	10	0.6	0.9	29.1	0.5	2.6	30.7	1.590	15.9	**Y**
92	10	6.5	8.7	42.8	2.6	10.9	41.1	-1.688	-16.9	N
93	10	4.1	6.8	38.5	1.7	9.3	38.7	0.158	1.6	**Y**

Table F5: Predicted Annual Mean NH_3 Concentrations in 2041 (µg/m^3)										
		2019 Base			2041					
Receptor Number	CLO	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
94	10	1.7	5.9	23.7	0.7	5.3	22.2	-1.538	-15.4	N
95	10	3.8	6.4	37.8	1.6	8.8	38.0	0.259	2.6	**Y**
96	10	2.7	4.5	34.8	1.1	6.2	35.0	0.149	1.5	**Y**
97	10	4.8	8.3	40.7	2.1	11.5	41.2	0.501	5.0	**Y**
98	10	3.6	6.2	37.5	1.6	8.6	37.8	0.308	3.1	**Y**
99	10	3.7	6.2	37.5	1.6	8.6	37.8	0.325	3.2	**Y**
100	10	0.4	0.6	63.2	0.1	0.7	63.1	-0.116	-1.2	N
101	10	0.4	0.6	63.2	0.2	0.8	63.1	-0.120	-1.2	N
102	10	0.2	0.4	31.0	0.1	0.5	31.0	0.035	0.3	N
103	10	0.3	0.5	31.2	0.1	0.7	31.2	0.058	0.6	N

Table F6: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2021 and 2031 (kg/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
1a	0.6	3.4	42.2	0.5	3.6	42.3	0.043	0.4	N	0.2	4.3	42.7	0.470	4.7	**Y**
1b	0.5	2.9	41.7	0.4	3.1	41.7	0.035	0.3	N	0.2	3.7	42.1	0.402	4.0	**Y**
1c	0.5	2.6	41.2	0.4	2.7	41.3	0.031	0.3	N	0.2	3.2	41.6	0.352	3.5	**Y**
1d	0.4	2.3	40.9	0.3	2.4	40.9	0.027	0.3	N	0.2	2.9	41.2	0.310	3.1	**Y**
1e	0.4	2.1	40.6	0.3	2.1	40.6	0.022	0.2	N	0.1	2.6	40.9	0.277	2.8	**Y**
1f	0.3	1.8	40.4	0.3	1.9	40.4	0.019	0.2	N	0.1	2.3	40.6	0.246	2.5	**Y**
1g	0.3	1.7	40.2	0.3	1.7	40.2	0.017	0.2	N	0.1	2.1	40.4	0.223	2.2	**Y**
1h	0.3	1.5	40.0	0.2	1.6	40.0	0.014	0.1	N	0.1	1.9	40.2	0.201	2.0	**Y**
1i	0.3	1.4	39.9	0.2	1.5	39.9	0.011	0.1	N	0.1	1.8	40.1	0.184	1.8	**Y**
1j	0.2	1.3	39.7	0.2	1.4	39.8	0.012	0.1	N	0.1	1.6	39.9	0.170	1.7	**Y**
1k	0.2	1.2	39.6	0.2	1.3	39.6	0.008	0.1	N	0.1	1.5	39.8	0.152	1.5	**Y**
2a	0.3	1.7	40.2	0.3	1.8	40.3	0.016	0.2	N	0.1	2.1	40.5	0.228	2.3	**Y**
2b	0.3	1.6	40.1	0.2	1.7	40.1	0.017	0.2	N	0.1	2.0	40.3	0.210	2.1	**Y**
2c	0.3	1.5	39.9	0.2	1.5	40.0	0.014	0.1	N	0.1	1.8	40.1	0.195	2.0	**Y**
2d	0.3	1.4	39.8	0.2	1.4	39.8	0.013	0.1	N	0.1	1.7	40.0	0.178	1.8	**Y**

Table F6: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2021 and 2031 (kg/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
2e	0.2	1.3	39.7	0.2	1.3	39.7	0.012	0.1	N	0.1	1.6	39.9	0.166	1.7	**Y**
2f	0.2	1.2	39.6	0.2	1.3	39.6	0.011	0.1	N	0.1	1.5	39.8	0.154	1.5	**Y**
2g	0.2	1.1	39.5	0.2	1.2	39.6	0.008	0.1	N	0.1	1.4	39.7	0.144	1.4	**Y**
2h	0.2	1.1	39.5	0.2	1.1	39.5	0.008	0.1	N	0.1	1.3	39.6	0.133	1.3	**Y**
2i	0.2	1.0	39.4	0.2	1.0	39.4	0.008	0.1	N	0.1	1.3	39.5	0.127	1.3	**Y**
2j	0.2	1.0	39.3	0.1	1.0	39.3	0.006	0.1	N	0.1	1.2	39.5	0.119	1.2	**Y**
2k	0.2	0.9	39.3	0.1	0.9	39.3	0.003	0.0	N	0.1	1.1	39.4	0.110	1.1	**Y**
83a	8.4	13.2	49.2	7.2	14.1	48.8	-0.363	-3.6	N	3.5	17.0	48.2	-1.042	-10.4	N
83b	3.6	5.2	36.3	3.0	5.5	36.1	-0.251	-2.5	N	1.4	6.6	35.6	-0.691	-6.9	N
83c	2.3	3.3	33.2	1.9	3.5	33.0	-0.192	-1.9	N	0.9	4.2	32.7	-0.500	-5.0	N
83d	1.7	2.5	31.9	1.5	2.6	31.7	-0.161	-1.6	N	0.7	3.2	31.4	-0.410	-4.1	N
83e	1.4	2.0	31.0	1.2	2.1	30.9	-0.136	-1.4	N	0.5	2.5	30.7	-0.342	-3.4	N
83f	1.7	2.4	31.7	1.4	2.5	31.5	-0.181	-1.8	N	0.6	3.0	31.2	-0.425	-4.3	N
83g	1.0	1.5	30.2	0.9	1.6	30.0	-0.113	-1.1	N	0.4	1.9	29.9	-0.273	-2.7	N
83h	0.9	1.3	29.9	0.8	1.4	29.8	-0.103	-1.0	N	0.4	1.7	29.6	-0.244	-2.4	N
83i	0.8	1.2	29.6	0.7	1.3	29.6	-0.096	-1.0	N	0.3	1.5	29.4	-0.227	-2.3	N
83j	0.8	1.1	29.5	0.6	1.1	29.4	-0.087	-0.9	N	0.3	1.4	29.3	-0.209	-2.1	N

Table F6: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2021 and 2031 (kg/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
83k	0.7	1.0	29.3	0.6	1.1	29.3	-0.082	-0.8	N	0.3	1.3	29.1	-0.195	-1.9	N
84a	7.6	11.7	46.9	6.5	12.5	46.6	-0.334	-3.3	N	3.2	15.2	45.9	-0.994	-9.9	N
84b	6.6	9.9	44.1	5.6	10.6	43.8	-0.306	-3.1	N	2.7	12.9	43.2	-0.930	-9.3	N
84c	3.3	4.8	35.6	2.8	5.1	35.4	-0.209	-2.1	N	1.3	6.1	35.0	-0.613	-6.1	N
84d	2.2	3.2	33.0	1.9	3.4	32.8	-0.161	-1.6	N	0.9	4.1	32.5	-0.453	-4.5	N
84e	1.7	2.4	31.7	1.4	2.6	31.6	-0.131	-1.3	N	0.7	3.1	31.3	-0.363	-3.6	N
84f	1.4	2.0	30.9	1.2	2.1	30.8	-0.114	-1.1	N	0.5	2.5	30.6	-0.307	-3.1	N
84g	1.2	1.7	30.4	1.0	1.8	30.3	-0.103	-1.0	N	0.4	2.1	30.2	-0.270	-2.7	N
84h	1.0	1.4	30.1	0.8	1.5	30.0	-0.091	-0.9	N	0.4	1.8	29.8	-0.237	-2.4	N
84i	0.9	1.3	29.8	0.8	1.4	29.7	-0.085	-0.8	N	0.3	1.6	29.6	-0.218	-2.2	N
84j	0.8	1.2	29.6	0.7	1.2	29.5	-0.078	-0.8	N	0.3	1.5	29.4	-0.199	-2.0	N
84k	0.7	1.1	29.4	0.6	1.1	29.3	-0.073	-0.7	N	0.3	1.3	29.2	-0.184	-1.8	N
85a	9.9	16.0	53.5	8.5	17.1	53.2	-0.265	-2.6	N	4.3	20.7	52.6	-0.896	-9.0	N
85b	3.8	5.6	37.0	3.2	5.9	36.8	-0.201	-2.0	N	1.5	7.2	36.3	-0.639	-6.4	N
85c	2.4	3.4	33.3	2.0	3.6	33.2	-0.145	-1.4	N	0.9	4.4	32.9	-0.443	-4.4	N
85d	1.8	2.5	31.9	1.5	2.7	31.8	-0.115	-1.2	N	0.7	3.2	31.5	-0.350	-3.5	N
85e	1.4	2.0	31.0	1.2	2.1	30.9	-0.100	-1.0	N	0.6	2.6	30.7	-0.293	-2.9	N

Table F6: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2021 and 2031 (kg/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
85f	1.2	1.7	30.5	1.0	1.8	30.4	-0.085	-0.9	N	0.5	2.2	30.2	-0.252	-2.5	N
85g	1.0	1.5	30.1	0.9	1.6	30.0	-0.079	-0.8	N	0.4	1.9	29.9	-0.224	-2.2	N
85h	0.9	1.3	29.8	0.8	1.4	29.7	-0.071	-0.7	N	0.4	1.7	29.6	-0.202	-2.0	N
85i	0.8	1.2	29.6	0.7	1.2	29.5	-0.068	-0.7	N	0.3	1.5	29.4	-0.186	-1.9	N
85j	0.0	0.0	27.6	0.0	0.0	27.6	0.000	0.0	N	0.0	0.0	27.6	-0.006	-0.1	N
85k	0.7	1.0	29.3	0.6	1.0	29.2	-0.059	-0.6	N	0.3	1.3	29.1	-0.162	-1.6	N
86a	8.2	12.8	48.6	7.0	13.7	48.3	-0.277	-2.8	N	3.4	16.6	47.6	-0.925	-9.2	N
86b	2.9	4.2	34.7	2.5	4.5	34.5	-0.162	-1.6	N	1.2	5.4	34.2	-0.517	-5.2	N
86c	2.1	2.9	32.6	1.7	3.1	32.5	-0.124	-1.2	N	0.8	3.8	32.2	-0.389	-3.9	N
86d	1.6	2.3	31.5	1.4	2.4	31.4	-0.103	-1.0	N	0.6	2.9	31.2	-0.315	-3.2	N
86e	1.3	1.9	30.8	1.1	2.0	30.7	-0.086	-0.9	N	0.5	2.4	30.5	-0.266	-2.7	N
86f	1.1	1.6	30.4	1.0	1.7	30.3	-0.076	-0.8	N	0.4	2.1	30.1	-0.234	-2.3	N
86g	1.0	1.4	30.0	0.9	1.5	30.0	-0.069	-0.7	N	0.4	1.8	29.8	-0.207	-2.1	N
86h	0.9	1.3	29.8	0.8	1.4	29.7	-0.065	-0.7	N	0.4	1.7	29.6	-0.191	-1.9	N
86i	0.8	1.2	29.6	0.7	1.2	29.5	-0.059	-0.6	N	0.3	1.5	29.4	-0.177	-1.8	N
86j	0.8	1.1	29.5	0.6	1.2	29.4	-0.056	-0.6	N	0.3	1.4	29.3	-0.165	-1.6	N
86k	0.7	1.0	29.3	0.6	1.1	29.3	-0.053	-0.5	N	0.3	1.3	29.2	-0.154	-1.5	N

Table F6: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2021 and 2031 (kg/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
87a	7.5	11.6	46.7	6.4	12.4	46.4	-0.267	-2.7	N	3.1	15.0	45.8	-0.901	-9.0	N
87b	3.2	4.6	35.4	2.7	4.9	35.2	-0.172	-1.7	N	1.3	6.0	34.9	-0.552	-5.5	N
87c	2.0	2.9	32.5	1.7	3.1	32.4	-0.118	-1.2	N	0.8	3.7	32.1	-0.380	-3.8	N
87d	1.5	2.1	31.2	1.2	2.2	31.1	-0.092	-0.9	N	0.6	2.7	30.9	-0.288	-2.9	N
87e	1.2	1.6	30.4	1.0	1.7	30.3	-0.075	-0.8	N	0.5	2.1	30.2	-0.235	-2.4	N
87f	1.0	1.3	29.9	0.8	1.4	29.8	-0.067	-0.7	N	0.4	1.7	29.7	-0.198	-2.0	N
87g	0.8	1.1	29.6	0.7	1.2	29.5	-0.058	-0.6	N	0.3	1.5	29.4	-0.171	-1.7	N
87h	0.7	1.0	29.3	0.6	1.1	29.3	-0.052	-0.5	N	0.3	1.3	29.2	-0.152	-1.5	N
87i	0.6	0.9	29.1	0.5	0.9	29.1	-0.045	-0.5	N	0.2	1.1	29.0	-0.137	-1.4	N
87j	0.6	0.8	29.0	0.5	0.8	28.9	-0.040	-0.4	N	0.2	1.0	28.8	-0.124	-1.2	N
87k	0.5	0.7	28.8	0.4	0.8	28.8	-0.040	-0.4	N	0.2	0.9	28.7	-0.114	-1.1	N
88a	9.2	14.6	51.3	7.9	15.6	51.1	-0.266	-2.7	N	3.9	18.9	50.4	-0.908	-9.1	N
88b	3.0	4.3	34.8	2.5	4.6	34.7	-0.162	-1.6	N	1.2	5.5	34.3	-0.516	-5.2	N
88c	1.8	2.5	31.9	1.5	2.7	31.8	-0.105	-1.0	N	0.7	3.3	31.6	-0.337	-3.4	N
88d	1.3	1.8	30.7	1.1	1.9	30.6	-0.082	-0.8	N	0.5	2.4	30.5	-0.251	-2.5	N
88e	1.0	1.4	30.0	0.9	1.5	30.0	-0.067	-0.7	N	0.4	1.8	29.8	-0.204	-2.0	N
88f	0.8	1.2	29.6	0.7	1.3	29.6	-0.056	-0.6	N	0.3	1.5	29.4	-0.172	-1.7	N

Table F6: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2021 and 2031 (kg/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
88g	0.7	1.0	29.3	0.6	1.1	29.3	-0.051	-0.5	N	0.3	1.3	29.2	-0.148	-1.5	N
88h	0.6	0.9	29.1	0.5	0.9	29.1	-0.046	-0.5	N	0.2	1.1	29.0	-0.133	-1.3	N
88i	0.6	0.8	28.9	0.5	0.8	28.9	-0.041	-0.4	N	0.2	1.0	28.8	-0.118	-1.2	N
88j	0.5	0.7	28.8	0.4	0.8	28.8	-0.041	-0.4	N	0.2	0.9	28.7	-0.108	-1.1	N
88k	0.5	0.7	28.7	0.4	0.7	28.7	-0.036	-0.4	N	0.2	0.8	28.6	-0.099	-1.0	N
89a	6.0	9.0	42.6	5.1	9.7	42.3	-0.250	-2.5	N	2.5	11.7	41.8	-0.829	-8.3	N
89b	2.5	3.5	33.6	2.1	3.8	33.5	-0.141	-1.4	N	1.0	4.6	33.2	-0.449	-4.5	N
89c	1.6	2.2	31.4	1.3	2.4	31.3	-0.097	-1.0	N	0.6	2.9	31.1	-0.303	-3.0	N
89d	1.2	1.7	30.4	1.0	1.8	30.3	-0.076	-0.8	N	0.5	2.1	30.2	-0.233	-2.3	N
89e	0.9	1.3	29.8	0.8	1.4	29.8	-0.064	-0.6	N	0.4	1.7	29.7	-0.191	-1.9	N
89f	0.8	1.1	29.5	0.7	1.2	29.4	-0.054	-0.5	N	0.3	1.4	29.3	-0.162	-1.6	N
89g	0.7	0.9	29.2	0.6	1.0	29.1	-0.048	-0.5	N	0.3	1.2	29.1	-0.138	-1.4	N
89h	0.6	0.8	29.0	0.5	0.9	29.0	-0.042	-0.4	N	0.2	1.1	28.9	-0.120	-1.2	N
89i	0.5	0.7	28.9	0.4	0.8	28.8	-0.039	-0.4	N	0.2	0.9	28.7	-0.111	-1.1	N
89j	0.5	0.7	28.7	0.4	0.7	28.7	-0.038	-0.4	N	0.2	0.9	28.6	-0.098	-1.0	N
89k	0.4	0.6	28.6	0.4	0.6	28.6	-0.034	-0.3	N	0.2	0.8	28.5	-0.090	-0.9	N
90a	0.7	0.9	29.2	0.7	1.1	29.3	0.126	1.3	Y	0.4	1.5	29.5	0.273	2.7	**Y**

Table F6: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2021 and 2031 (kg/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
90b	0.5	0.6	28.7	0.4	0.7	28.7	0.050	0.5	N	0.2	1.0	28.8	0.113	1.1	**Y**
90c	0.4	0.5	28.5	0.3	0.6	28.5	0.034	0.3	N	0.2	0.8	28.6	0.073	0.7	N
90d	0.3	0.5	28.4	0.3	0.5	28.4	0.022	0.2	N	0.1	0.7	28.4	0.048	0.5	N
90e	0.3	0.4	28.3	0.3	0.5	28.4	0.013	0.1	N	0.1	0.6	28.4	0.033	0.3	N
90f	0.3	0.4	28.3	0.2	0.5	28.3	0.011	0.1	N	0.1	0.6	28.3	0.024	0.2	N
90g	0.3	0.4	28.3	0.2	0.4	28.3	0.007	0.1	N	0.1	0.6	28.3	0.017	0.2	N
90h	0.3	0.4	28.2	0.2	0.4	28.3	0.006	0.1	N	0.1	0.6	28.3	0.012	0.1	N
90i	0.3	0.4	28.2	0.2	0.4	28.2	0.005	0.0	N	0.1	0.5	28.2	0.009	0.1	N
90j	0.2	0.4	28.2	0.2	0.4	28.2	0.002	0.0	N	0.1	0.5	28.2	0.004	0.0	N
90k	0.2	0.4	28.2	0.2	0.4	28.2	0.001	0.0	N	0.1	0.5	28.2	0.002	0.0	N
91a	0.6	0.9	29.1	0.6	1.2	29.3	0.180	1.8	Y	0.3	1.7	29.6	0.436	4.4	**Y**
91b	0.3	0.5	28.4	0.3	0.6	28.4	0.038	0.4	N	0.1	0.8	28.5	0.104	1.0	**Y**
91c	0.2	0.4	28.2	0.2	0.4	28.2	0.004	0.0	N	0.1	0.6	28.3	0.026	0.3	N
91d	0.2	0.3	28.2	0.2	0.4	28.2	-0.011	-0.1	N	0.1	0.5	28.2	-0.005	0.0	N
91e	0.2	0.3	28.1	0.2	0.3	28.1	-0.018	-0.2	N	0.1	0.4	28.1	-0.019	-0.2	N
91f	0.2	0.3	28.1	0.2	0.3	28.1	-0.023	-0.2	N	0.1	0.4	28.1	-0.033	-0.3	N
91g	0.2	0.3	28.1	0.2	0.3	28.1	-0.025	-0.3	N	0.1	0.4	28.1	-0.037	-0.4	N

Table F6: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2021 and 2031 (kg/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
91h	0.2	0.3	28.1	0.2	0.3	28.1	-0.028	-0.3	N	0.1	0.4	28.1	-0.043	-0.4	N
91j	0.2	0.3	28.1	0.2	0.3	28.1	-0.029	-0.3	N	0.1	0.4	28.1	-0.047	-0.5	N
91i	0.2	0.3	28.1	0.2	0.3	28.1	-0.031	-0.3	N	0.1	0.4	28.1	-0.050	-0.5	N
91k	0.2	0.3	28.1	0.2	0.3	28.1	-0.031	-0.3	N	0.1	0.4	28.1	-0.052	-0.5	N
93a	4.0	6.8	38.5	3.4	6.9	37.8	-0.637	-6.4	N	1.6	8.4	37.6	-0.874	-8.7	N
93b	1.9	3.1	32.6	1.6	3.1	32.2	-0.345	-3.5	N	0.7	3.7	32.0	-0.541	-5.4	N
93c	1.4	2.3	31.4	1.2	2.3	31.1	-0.280	-2.8	N	0.5	2.8	30.9	-0.459	-4.6	N
93d	1.3	2.0	30.9	1.0	2.0	30.7	-0.258	-2.6	N	0.5	2.4	30.5	-0.429	-4.3	N
93e	1.2	1.9	30.7	1.0	1.9	30.4	-0.243	-2.4	N	0.4	2.2	30.3	-0.407	-4.1	N
93f	0.0	0.0	27.6	0.0	0.0	27.6	-0.009	-0.1	N	0.0	0.0	27.6	-0.006	-0.1	N
93g	1.1	1.8	30.5	0.9	1.7	30.2	-0.235	-2.4	N	0.4	2.1	30.1	-0.400	-4.0	N
93h	1.1	1.7	30.4	0.9	1.7	30.2	-0.231	-2.3	N	0.4	2.0	30.0	-0.395	-4.0	N
93i	1.1	1.7	30.4	0.8	1.7	30.1	-0.232	-2.3	N	0.4	2.0	30.0	-0.394	-3.9	N
93j	1.0	1.7	30.3	0.8	1.7	30.1	-0.230	-2.3	N	0.4	2.0	30.0	-0.391	-3.9	N
93k	1.0	1.7	30.3	0.8	1.7	30.1	-0.227	-2.3	N	0.4	2.0	29.9	-0.388	-3.9	N
94a	1.7	3.9	21.7	1.4	3.9	21.5	-0.273	-2.7	N	0.7	4.8	21.6	-0.162	-1.6	N
94b	0.7	1.5	18.2	0.6	1.5	18.1	-0.126	-1.3	N	0.3	1.8	18.1	-0.125	-1.2	N

Table F6: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2021 and 2031 (kg/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
94c	0.5	1.1	17.7	0.4	1.0	17.6	-0.100	-1.0	N	0.2	1.3	17.5	-0.113	-1.1	N
94d	0.4	0.9	17.4	0.3	0.9	17.3	-0.088	-0.9	N	0.2	1.0	17.3	-0.106	-1.1	N
94e	0.4	0.8	17.2	0.3	0.8	17.2	-0.080	-0.8	N	0.1	0.9	17.1	-0.102	-1.0	N
94f	0.3	0.7	17.1	0.3	0.7	17.1	-0.074	-0.7	N	0.1	0.8	17.0	-0.096	-1.0	N
94g	0.3	0.6	17.1	0.3	0.6	17.0	-0.071	-0.7	N	0.1	0.7	17.0	-0.093	-0.9	N
94h	0.3	0.6	17.0	0.2	0.6	16.9	-0.067	-0.7	N	0.1	0.7	16.9	-0.090	-0.9	N
94i	0.3	0.6	16.9	0.2	0.5	16.9	-0.064	-0.6	N	0.1	0.6	16.8	-0.086	-0.9	N
94j	0.3	0.5	16.9	0.2	0.5	16.8	-0.061	-0.6	N	0.1	0.6	16.8	-0.082	-0.8	N
94k	0.2	0.5	16.8	0.2	0.5	16.8	-0.058	-0.6	N	0.1	0.6	16.8	-0.080	-0.8	N
95a	3.7	6.4	37.8	3.1	6.5	37.2	-0.568	-5.7	N	1.5	7.9	37.0	-0.758	-7.6	N
95b	1.7	2.7	32.0	1.4	2.7	31.7	-0.281	-2.8	N	0.6	3.3	31.6	-0.415	-4.2	N
95c	1.2	2.0	30.7	1.0	1.9	30.5	-0.213	-2.1	N	0.4	2.4	30.4	-0.330	-3.3	N
95d	1.0	1.6	30.2	0.8	1.6	30.0	-0.188	-1.9	N	0.4	2.0	29.9	-0.300	-3.0	N
95e	0.9	1.5	30.0	0.7	1.5	29.8	-0.177	-1.8	N	0.3	1.8	29.7	-0.287	-2.9	N
95f	0.9	1.4	29.9	0.7	1.4	29.7	-0.177	-1.8	N	0.3	1.7	29.6	-0.289	-2.9	N
95g	0.9	1.4	29.9	0.7	1.4	29.7	-0.180	-1.8	N	0.3	1.7	29.6	-0.300	-3.0	N
95h	0.9	1.5	29.9	0.7	1.4	29.8	-0.188	-1.9	N	0.3	1.7	29.6	-0.316	-3.2	N

Table F6: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2021 and 2031 (kg/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
95i	0.9	1.5	30.1	0.8	1.5	29.9	-0.204	-2.0	N	0.3	1.8	29.7	-0.343	-3.4	N
95j	1.0	1.7	30.3	0.8	1.6	30.1	-0.220	-2.2	N	0.4	1.9	29.9	-0.378	-3.8	N
95k	1.1	1.9	30.6	0.9	1.8	30.3	-0.249	-2.5	N	0.4	2.2	30.2	-0.430	-4.3	N
97a	4.8	8.3	40.7	4.0	8.4	40.0	-0.689	-6.9	N	1.9	10.3	39.8	-0.854	-8.5	N
97b	1.6	2.6	31.8	1.3	2.6	31.5	-0.255	-2.5	N	0.6	3.2	31.4	-0.361	-3.6	N
97c	1.0	1.7	30.3	0.8	1.7	30.1	-0.173	-1.7	N	0.4	2.0	30.0	-0.253	-2.5	N
97d	0.8	1.3	29.7	0.6	1.3	29.5	-0.139	-1.4	N	0.3	1.6	29.5	-0.206	-2.1	N
97e	0.7	1.1	29.3	0.5	1.1	29.2	-0.120	-1.2	N	0.2	1.3	29.1	-0.181	-1.8	N
97f	0.6	0.9	29.1	0.5	0.9	29.0	-0.107	-1.1	N	0.2	1.1	29.0	-0.167	-1.7	N
97g	0.5	0.9	29.0	0.4	0.9	28.9	-0.102	-1.0	N	0.2	1.0	28.8	-0.157	-1.6	N
97h	0.5	0.8	28.9	0.4	0.8	28.8	-0.097	-1.0	N	0.2	1.0	28.7	-0.152	-1.5	N
97i	0.5	0.7	28.8	0.4	0.7	28.7	-0.092	-0.9	N	0.2	0.9	28.7	-0.145	-1.4	N
97j	0.0	0.0	27.6	0.0	0.0	27.6	-0.009	-0.1	N	0.0	0.0	27.6	-0.006	-0.1	N
97k	0.4	0.7	28.7	0.3	0.7	28.6	-0.084	-0.8	N	0.1	0.8	28.6	-0.138	-1.4	N
98a	3.6	6.2	37.4	3.0	6.3	36.9	-0.539	-5.4	N	1.5	7.7	36.7	-0.702	-7.0	N
98b	1.1	1.8	30.4	0.9	1.8	30.3	-0.179	-1.8	N	0.4	2.2	30.2	-0.258	-2.6	N
98c	0.7	1.1	29.4	0.6	1.2	29.3	-0.123	-1.2	N	0.3	1.4	29.3	-0.183	-1.8	N

Table F6: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2021 and 2031 (kg/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
98d	0.5	0.9	29.0	0.4	0.9	28.9	-0.099	-1.0	N	0.2	1.1	28.9	-0.149	-1.5	N
98e	0.5	0.8	28.8	0.4	0.8	28.7	-0.088	-0.9	N	0.2	0.9	28.7	-0.132	-1.3	N
98f	0.4	0.6	28.6	0.3	0.6	28.6	-0.078	-0.8	N	0.1	0.8	28.5	-0.117	-1.2	N
98g	0.4	0.6	28.5	0.3	0.6	28.5	-0.072	-0.7	N	0.1	0.7	28.4	-0.110	-1.1	N
98h	0.3	0.5	28.5	0.3	0.5	28.4	-0.067	-0.7	N	0.1	0.6	28.4	-0.101	-1.0	N
98i	0.3	0.5	28.4	0.2	0.5	28.3	-0.062	-0.6	N	0.1	0.6	28.3	-0.099	-1.0	N
98j	0.3	0.5	28.4	0.2	0.5	28.3	-0.062	-0.6	N	0.1	0.6	28.3	-0.097	-1.0	N
98k	0.3	0.4	28.3	0.2	0.4	28.3	-0.056	-0.6	N	0.1	0.5	28.2	-0.091	-0.9	N
99a	3.6	6.2	37.5	3.1	6.3	36.9	-0.542	-5.4	N	1.5	7.7	36.8	-0.700	-7.0	N
99b	1.4	2.3	31.3	1.2	2.3	31.1	-0.226	-2.3	N	0.5	2.8	31.0	-0.321	-3.2	N
99c	0.9	1.5	30.0	0.7	1.5	29.8	-0.152	-1.5	N	0.3	1.8	29.7	-0.225	-2.2	N
99d	0.7	1.1	29.4	0.6	1.1	29.3	-0.120	-1.2	N	0.3	1.4	29.2	-0.181	-1.8	N
99e	0.6	0.9	29.1	0.5	0.9	29.0	-0.102	-1.0	N	0.2	1.1	28.9	-0.157	-1.6	N
99f	0.5	0.8	28.9	0.4	0.8	28.8	-0.091	-0.9	N	0.2	1.0	28.8	-0.140	-1.4	N
99g	0.4	0.7	28.8	0.4	0.7	28.7	-0.086	-0.9	N	0.2	0.9	28.6	-0.130	-1.3	N
99h	0.4	0.7	28.7	0.3	0.7	28.6	-0.078	-0.8	N	0.1	0.8	28.5	-0.121	-1.2	N
99i	0.4	0.6	28.6	0.3	0.6	28.5	-0.073	-0.7	N	0.1	0.7	28.5	-0.117	-1.2	N

Table F7: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2041 (kg/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
1a	0.6	3.4	42.2	0.2	4.4	42.8	0.623	6.2	Y
1b	0.5	2.9	41.7	0.2	3.8	42.2	0.535	5.3	Y
1c	0.5	2.6	41.2	0.2	3.3	41.7	0.467	4.7	Y
1d	0.4	2.3	40.9	0.2	3.0	41.3	0.412	4.1	Y
1e	0.4	2.1	40.6	0.1	2.6	41.0	0.369	3.7	Y
1f	0.3	1.8	40.4	0.1	2.4	40.7	0.329	3.3	Y
1g	0.3	1.7	40.2	0.1	2.2	40.5	0.299	3.0	Y
1h	0.3	1.5	40.0	0.1	2.0	40.3	0.268	2.7	Y
1i	0.3	1.4	39.9	0.1	1.8	40.1	0.245	2.5	Y
1j	0.2	1.3	39.7	0.1	1.7	40.0	0.228	2.3	Y
1k	0.2	1.2	39.6	0.1	1.6	39.8	0.209	2.1	Y
2a	0.3	1.7	40.2	0.1	2.2	40.5	0.306	3.1	Y
2b	0.3	1.6	40.1	0.1	2.1	40.4	0.282	2.8	Y
2c	0.3	1.5	39.9	0.1	1.9	40.2	0.260	2.6	Y
2d	0.3	1.4	39.8	0.1	1.8	40.1	0.239	2.4	Y

Table F7: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2041 (kg/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
2e	0.2	1.3	39.7	0.1	1.7	39.9	0.223	2.2	**Y**
2f	0.2	1.2	39.6	0.1	1.6	39.8	0.208	2.1	**Y**
2g	0.2	1.1	39.5	0.1	1.5	39.7	0.195	1.9	**Y**
2h	0.2	1.1	39.5	0.1	1.4	39.6	0.181	1.8	**Y**
2i	0.2	1.0	39.4	0.1	1.3	39.6	0.172	1.7	**Y**
2j	0.2	1.0	39.3	0.1	1.2	39.5	0.159	1.6	**Y**
2k	0.2	0.9	39.3	0.1	1.2	39.4	0.150	1.5	**Y**
83a	8.4	13.2	49.2	3.8	18.1	49.5	0.272	2.7	**Y**
83b	3.6	5.2	36.3	1.5	7.1	36.2	-0.174	-1.7	N
83c	2.3	3.3	33.2	1.0	4.4	33.0	-0.177	-1.8	N
83d	1.7	2.5	31.9	0.7	3.4	31.7	-0.165	-1.7	N
83e	1.4	2.0	31.0	0.6	2.7	30.9	-0.149	-1.5	N
83f	1.7	2.4	31.7	0.7	3.2	31.5	-0.192	-1.9	N
83g	1.0	1.5	30.2	0.4	2.0	30.0	-0.130	-1.3	N
83h	0.9	1.3	29.9	0.4	1.8	29.7	-0.118	-1.2	N
83i	0.8	1.2	29.6	0.3	1.6	29.5	-0.111	-1.1	N

Table F7: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2041 (kg/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
83j	0.8	1.1	29.5	0.3	1.5	29.4	-0.104	-1.0	N
83k	0.7	1.0	29.3	0.3	1.4	29.2	-0.099	-1.0	N
84a	7.6	11.7	46.9	3.4	16.1	47.1	0.178	1.8	**Y**
84b	6.6	9.9	44.1	2.9	13.7	44.2	0.077	0.8	N
84c	3.3	4.8	35.6	1.4	6.5	35.5	-0.128	-1.3	N
84d	2.2	3.2	33.0	0.9	4.3	32.9	-0.131	-1.3	N
84e	1.7	2.4	31.7	0.7	3.3	31.6	-0.120	-1.2	N
84f	1.4	2.0	30.9	0.6	2.7	30.8	-0.109	-1.1	N
84g	1.2	1.7	30.4	0.5	2.2	30.3	-0.103	-1.0	N
84h	1.0	1.4	30.1	0.4	2.0	30.0	-0.094	-0.9	N
84i	0.9	1.3	29.8	0.4	1.7	29.7	-0.090	-0.9	N
84j	0.8	1.2	29.6	0.3	1.6	29.5	-0.084	-0.8	N
84k	0.7	1.1	29.4	0.3	1.4	29.3	-0.078	-0.8	N
85a	9.9	16.0	53.5	4.5	22.1	54.2	0.715	7.1	**Y**
85b	3.8	5.6	37.0	1.6	7.7	36.9	-0.068	-0.7	N
85c	2.4	3.4	33.3	1.0	4.7	33.3	-0.095	-1.0	N

Table F7: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2041 (kg/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
85d	1.8	2.5	31.9	0.7	3.4	31.8	-0.089	-0.9	N
85e	1.4	2.0	31.0	0.6	2.8	30.9	-0.083	-0.8	N
85f	1.2	1.7	30.5	0.5	2.3	30.4	-0.078	-0.8	N
85g	1.0	1.5	30.1	0.4	2.0	30.0	-0.073	-0.7	N
85h	0.9	1.3	29.8	0.4	1.8	29.7	-0.071	-0.7	N
85i	0.8	1.2	29.6	0.3	1.6	29.5	-0.065	-0.7	N
85j	0.0	0.0	27.6	0.0	0.0	27.6	-0.006	-0.1	N
85k	0.7	1.0	29.3	0.3	1.3	29.2	-0.060	-0.6	N
86a	8.2	12.8	48.6	3.7	17.7	48.9	0.369	3.7	**Y**
86b	2.9	4.2	34.7	1.2	5.8	34.6	-0.081	-0.8	N
86c	2.1	2.9	32.6	0.9	4.1	32.5	-0.080	-0.8	N
86d	1.6	2.3	31.5	0.7	3.1	31.4	-0.073	-0.7	N
86e	1.3	1.9	30.8	0.6	2.6	30.7	-0.064	-0.6	N
86f	1.1	1.6	30.4	0.5	2.2	30.3	-0.057	-0.6	N
86g	1.0	1.4	30.0	0.4	2.0	30.0	-0.051	-0.5	N
86h	0.9	1.3	29.8	0.4	1.8	29.7	-0.049	-0.5	N

Table F7: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2041 (kg/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
86i	0.8	1.2	29.6	0.3	1.6	29.6	-0.044	-0.4	N
86j	0.8	1.1	29.5	0.3	1.5	29.4	-0.042	-0.4	N
86k	0.7	1.0	29.3	0.3	1.4	29.3	-0.040	-0.4	N
87a	7.5	11.6	46.7	3.3	16.0	47.0	0.282	2.8	**Y**
87b	3.2	4.6	35.4	1.4	6.4	35.3	-0.070	-0.7	N
87c	2.0	2.9	32.5	0.9	4.0	32.4	-0.075	-0.8	N
87d	1.5	2.1	31.2	0.6	2.9	31.1	-0.064	-0.6	N
87e	1.2	1.6	30.4	0.5	2.3	30.3	-0.058	-0.6	N
87f	1.0	1.3	29.9	0.4	1.9	29.8	-0.054	-0.5	N
87g	0.8	1.1	29.6	0.3	1.6	29.5	-0.048	-0.5	N
87h	0.7	1.0	29.3	0.3	1.4	29.3	-0.045	-0.4	N
87i	0.6	0.9	29.1	0.3	1.2	29.1	-0.042	-0.4	N
87j	0.6	0.8	29.0	0.2	1.1	28.9	-0.037	-0.4	N
87k	0.5	0.7	28.8	0.2	1.0	28.8	-0.036	-0.4	N
88a	9.2	14.6	51.3	4.1	20.2	51.9	0.580	5.8	**Y**
88b	3.0	4.3	34.8	1.3	5.9	34.8	-0.053	-0.5	N

Table F7: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2041 (kg/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
88c	1.8	2.5	31.9	0.8	3.5	31.9	-0.048	-0.5	N
88d	1.3	1.8	30.7	0.5	2.5	30.7	-0.036	-0.4	N
88e	1.0	1.4	30.0	0.4	2.0	30.0	-0.027	-0.3	N
88f	0.8	1.2	29.6	0.4	1.6	29.6	-0.022	-0.2	N
88g	0.7	1.0	29.3	0.3	1.4	29.3	-0.018	-0.2	N
88h	0.6	0.9	29.1	0.3	1.2	29.1	-0.013	-0.1	N
88i	0.6	0.8	28.9	0.2	1.1	28.9	-0.009	-0.1	N
88j	0.5	0.7	28.8	0.2	1.0	28.8	-0.007	-0.1	N
88k	0.5	0.7	28.7	0.2	0.9	28.7	-0.002	0.0	N
89a	6.0	9.0	42.6	2.6	12.5	42.7	0.103	1.0	**Y**
89b	2.5	3.5	33.6	1.1	4.9	33.6	-0.066	-0.7	N
89c	1.6	2.2	31.4	0.7	3.1	31.4	-0.050	-0.5	N
89d	1.2	1.7	30.4	0.5	2.3	30.4	-0.039	-0.4	N
89e	0.9	1.3	29.8	0.4	1.8	29.8	-0.029	-0.3	N
89f	0.8	1.1	29.5	0.3	1.5	29.4	-0.022	-0.2	N
89g	0.7	0.9	29.2	0.3	1.3	29.2	-0.012	-0.1	N

Table F7: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2041 (kg/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
89h	0.6	0.8	29.0	0.2	1.2	29.0	-0.003	0.0	N
89i	0.5	0.7	28.9	0.2	1.0	28.9	0.003	0.0	N
89j	0.5	0.7	28.7	0.2	0.9	28.7	0.011	0.1	N
89k	0.4	0.6	28.6	0.2	0.9	28.7	0.022	0.2	N
90a	0.7	0.9	29.2	0.6	2.4	30.5	1.321	13.2	**Y**
90b	0.5	0.6	28.7	0.3	1.4	29.3	0.664	6.6	**Y**
90c	0.4	0.5	28.5	0.2	1.1	29.0	0.478	4.8	**Y**
90d	0.3	0.5	28.4	0.2	1.0	28.8	0.365	3.7	**Y**
90e	0.3	0.4	28.3	0.2	0.9	28.6	0.304	3.0	**Y**
90f	0.3	0.4	28.3	0.2	0.8	28.6	0.266	2.7	**Y**
90g	0.3	0.4	28.3	0.1	0.8	28.5	0.237	2.4	**Y**
90h	0.3	0.4	28.2	0.1	0.7	28.5	0.215	2.2	**Y**
90i	0.3	0.4	28.2	0.1	0.7	28.4	0.202	2.0	**Y**
90j	0.2	0.4	28.2	0.1	0.7	28.4	0.184	1.8	**Y**
90k	0.2	0.4	28.2	0.1	0.7	28.4	0.175	1.8	**Y**
91a	0.6	0.9	29.1	0.5	2.6	30.7	1.593	15.9	**Y**

Table F7: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2041 (kg/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
91b	0.3	0.5	28.4	0.2	1.1	28.9	0.505	5.0	**Y**
91c	0.2	0.4	28.2	0.1	0.7	28.5	0.252	2.5	**Y**
91d	0.2	0.3	28.2	0.1	0.6	28.3	0.156	1.6	**Y**
91e	0.2	0.3	28.1	0.1	0.5	28.2	0.105	1.0	**Y**
91f	0.2	0.3	28.1	0.1	0.5	28.2	0.069	0.7	N
91g	0.2	0.3	28.1	0.1	0.5	28.2	0.050	0.5	N
91h	0.2	0.3	28.1	0.1	0.5	28.1	0.035	0.4	N
91j	0.2	0.3	28.1	0.1	0.5	28.1	0.023	0.2	N
91i	0.2	0.3	28.1	0.1	0.4	28.1	0.015	0.2	N
91k	0.2	0.3	28.1	0.1	0.4	28.1	0.008	0.1	N
93a	4.0	6.8	38.5	1.8	9.3	38.7	0.225	2.2	**Y**
93b	1.9	3.1	32.6	0.8	4.1	32.4	-0.112	-1.1	N
93c	1.4	2.3	31.4	0.6	3.0	31.2	-0.169	-1.7	N
93d	1.3	2.0	30.9	0.5	2.6	30.7	-0.194	-1.9	N
93e	1.2	1.9	30.7	0.5	2.4	30.5	-0.207	-2.1	N
93f	0.0	0.0	27.6	0.0	0.0	27.6	-0.006	-0.1	N

Table F7: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2041 (kg/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
93g	1.1	1.8	30.5	0.4	2.2	30.2	-0.228	-2.3	N
93h	1.1	1.7	30.4	0.4	2.2	30.2	-0.231	-2.3	N
93i	1.1	1.7	30.4	0.4	2.1	30.1	-0.238	-2.4	N
93j	1.0	1.7	30.3	0.4	2.1	30.1	-0.239	-2.4	N
93k	1.0	1.7	30.3	0.4	2.1	30.1	-0.242	-2.4	N
94a	1.7	3.9	21.7	0.8	5.3	22.2	0.442	4.4	**Y**
94b	0.7	1.5	18.2	0.3	1.9	18.3	0.067	0.7	N
94c	0.5	1.1	17.7	0.2	1.4	17.7	0.012	0.1	N
94d	0.4	0.9	17.4	0.2	1.1	17.4	-0.011	-0.1	N
94e	0.4	0.8	17.2	0.1	1.0	17.2	-0.022	-0.2	N
94f	0.3	0.7	17.1	0.1	0.9	17.1	-0.030	-0.3	N
94g	0.3	0.6	17.1	0.1	0.8	17.0	-0.034	-0.3	N
94h	0.3	0.6	17.0	0.1	0.7	16.9	-0.036	-0.4	N
94i	0.3	0.6	16.9	0.1	0.7	16.9	-0.038	-0.4	N
94j	0.3	0.5	16.9	0.1	0.6	16.8	-0.038	-0.4	N
94k	0.2	0.5	16.8	0.1	0.6	16.8	-0.038	-0.4	N

Table F7: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2041 (kg/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
95a	3.7	6.4	37.8	0.8	5.9	34.3	-3.458	-34.6	N
95b	1.7	2.7	32.0	0.4	2.5	30.4	-1.579	-15.8	N
95c	1.2	2.0	30.7	0.2	1.7	29.6	-1.165	-11.7	N
95d	1.0	1.6	30.2	0.2	1.4	29.2	-1.002	-10.0	N
95e	0.9	1.5	30.0	0.2	1.3	29.1	-0.931	-9.3	N
95f	0.9	1.4	29.9	0.2	1.2	29.0	-0.908	-9.1	N
95g	0.9	1.4	29.9	0.2	1.2	29.0	-0.917	-9.2	N
95h	0.9	1.5	29.9	0.2	1.2	29.0	-0.950	-9.5	N
95i	0.9	1.5	30.1	0.2	1.3	29.1	-1.015	-10.2	N
95j	1.0	1.7	30.3	0.2	1.4	29.2	-1.108	-11.1	N
95k	1.1	1.9	30.6	0.2	1.5	29.3	-1.251	-12.5	N
97a	4.8	8.3	40.7	1.1	7.7	36.3	-4.326	-43.3	N
97b	1.6	2.6	31.8	0.3	2.4	30.3	-1.466	-14.7	N
97c	1.0	1.7	30.3	0.2	1.5	29.3	-0.962	-9.6	N
97d	0.8	1.3	29.7	0.2	1.2	28.9	-0.754	-7.5	N
97e	0.7	1.1	29.3	0.1	1.0	28.7	-0.639	-6.4	N

Table F7: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2041 (kg/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
97f	0.6	0.9	29.1	0.1	0.8	28.5	-0.571	-5.7	N
97g	0.5	0.9	29.0	0.1	0.7	28.5	-0.526	-5.3	N
97h	0.5	0.8	28.9	0.1	0.7	28.4	-0.493	-4.9	N
97i	0.5	0.7	28.8	0.1	0.6	28.3	-0.466	-4.7	N
97j	0.0	0.0	27.6	0.0	0.0	27.6	-0.003	0.0	N
97k	0.4	0.7	28.7	0.1	0.6	28.3	-0.434	-4.3	N
98a	3.6	6.2	37.4	0.8	5.7	34.1	-3.309	-33.1	N
98b	1.1	1.8	30.4	0.2	1.6	29.4	-1.005	-10.0	N
98c	0.7	1.1	29.4	0.1	1.0	28.8	-0.671	-6.7	N
98d	0.5	0.9	29.0	0.1	0.8	28.5	-0.527	-5.3	N
98e	0.5	0.8	28.8	0.1	0.7	28.4	-0.453	-4.5	N
98f	0.4	0.6	28.6	0.1	0.6	28.2	-0.394	-3.9	N
98g	0.4	0.6	28.5	0.1	0.5	28.2	-0.360	-3.6	N
98h	0.3	0.5	28.5	0.1	0.5	28.1	-0.332	-3.3	N
98i	0.3	0.5	28.4	0.1	0.4	28.1	-0.310	-3.1	N
98j	0.3	0.5	28.4	0.1	0.4	28.1	-0.298	-3.0	N

Table F7: Predicted Annual Mean NH_3 Concentrations across 200m Transects during 2041 (kg/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total N-Deposition	From NO_2	From NH_3	Total N-Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
98k	0.3	0.4	28.3	0.1	0.4	28.0	-0.282	-2.8	N
99a	3.6	6.2	37.5	0.8	5.7	34.2	-3.312	-33.1	N
99b	1.4	2.3	31.3	0.3	2.1	30.0	-1.290	-12.9	N
99c	0.9	1.5	30.0	0.2	1.3	29.1	-0.845	-8.4	N
99d	0.7	1.1	29.4	0.1	1.0	28.8	-0.659	-6.6	N
99e	0.6	0.9	29.1	0.1	0.8	28.5	-0.552	-5.5	N
99f	0.5	0.8	28.9	0.1	0.7	28.4	-0.487	-4.9	N
99g	0.4	0.7	28.8	0.1	0.6	28.3	-0.444	-4.4	N
99h	0.4	0.7	28.7	0.1	0.6	28.3	-0.405	-4.0	N
99i	0.4	0.6	28.6	0.1	0.5	28.2	-0.381	-3.8	N

Table F8: Predicted Acid Deposition (keq/ha/yr)																
		2019 Base			2021						2031					
Receptor Number	CLO	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
1	1.73	0.04	0.24	2.99	0.04	0.25	2.99	0.003	2.15	**Y**	0.02	0.30	3.02	0.033	23.22	**Y**
2	1.73	0.02	0.12	2.84	0.02	0.13	2.85	0.001	0.96	N	0.01	0.15	2.86	0.016	11.28	**Y**
3	1.73	0.24	0.32	3.26	0.20	0.31	3.21	-0.054	-37.78	N	0.09	0.36	3.15	-0.111	-78.52	N
4	1.73	0.59	0.98	4.28	0.49	0.96	4.15	-0.128	-89.82	N	0.22	1.11	4.04	-0.238	-167.57	N
5	1.73	0.75	1.49	4.94	0.63	1.45	4.78	-0.160	-112.67	N	0.29	1.69	4.68	-0.259	-182.60	N
6	1.73	0.39	0.71	3.80	0.32	0.69	3.71	-0.085	-60.10	N	0.14	0.80	3.65	-0.150	-105.43	N
7	1.73	0.75	1.48	4.93	0.63	1.45	4.77	-0.159	-112.23	N	0.29	1.68	4.67	-0.259	-182.28	N
8	1.73	0.45	0.83	3.99	0.38	0.81	3.89	-0.099	-69.56	N	0.17	0.95	3.82	-0.172	-121.45	N
9	1.73	0.82	1.44	4.95	0.68	1.40	4.78	-0.171	-120.52	N	0.32	1.63	4.65	-0.305	-215.02	N
10	1.73	0.57	0.96	4.23	0.48	0.94	4.11	-0.122	-85.88	N	0.22	1.09	4.01	-0.228	-160.39	N
11	1.73	0.55	0.94	5.89	0.46	0.92	5.77	-0.114	-80.38	N	0.21	1.07	5.68	-0.211	-148.24	N
12	1.73	0.76	1.32	4.77	0.63	1.28	4.62	-0.158	-111.26	N	0.29	1.49	4.49	-0.287	-201.85	N
13	1.73	0.81	1.29	6.50	0.68	1.29	6.36	-0.136	-95.48	N	0.32	1.49	6.21	-0.289	-203.24	N
14	1.73	0.45	0.80	5.65	0.37	0.80	5.57	-0.078	-54.84	N	0.16	0.92	5.49	-0.161	-113.42	N
15	1.73	0.56	1.17	6.13	0.46	1.17	6.04	-0.089	-62.96	N	0.21	1.34	5.95	-0.177	-124.33	N
16	1.73	0.10	0.18	4.68	0.08	0.19	4.67	-0.012	-8.65	N	0.04	0.21	4.65	-0.032	-22.76	N

Table F8: Predicted Acid Deposition (keq/ha/yr)																
		2019 Base			2021						2031					
Receptor Number	CLO	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
17	1.73	0.55	1.20	6.15	0.46	1.21	6.06	-0.084	-59.47	N	0.20	1.38	5.98	-0.166	-117.23	N
18	1.73	0.84	1.97	7.21	0.71	1.98	7.09	-0.125	-88.02	N	0.32	2.27	6.98	-0.229	-161.14	N
19	1.73	1.14	2.81	8.35	0.95	2.83	8.18	-0.165	-116.39	N	0.44	3.24	8.08	-0.273	-192.57	N
20	1.73	1.08	2.66	8.14	0.91	2.68	7.99	-0.158	-111.16	N	0.42	3.06	7.88	-0.266	-187.51	N
21	1.73	0.69	1.55	6.64	0.58	1.56	6.54	-0.104	-73.12	N	0.26	1.79	6.44	-0.197	-138.57	N
22	1.73	0.50	1.00	5.90	0.42	1.00	5.81	-0.084	-58.81	N	0.18	1.15	5.73	-0.168	-117.99	N
23	1.73	0.64	1.03	6.07	0.53	1.02	5.95	-0.128	-89.95	N	0.24	1.18	5.82	-0.252	-177.31	N
24	1.73	0.58	1.14	6.12	0.48	1.12	6.00	-0.121	-84.96	N	0.22	1.30	5.92	-0.201	-141.63	N
25	1.73	0.13	0.24	4.77	0.11	0.24	4.75	-0.026	-18.62	N	0.05	0.28	4.72	-0.051	-35.72	N
26	1.73	0.61	1.18	6.19	0.51	1.15	6.06	-0.130	-91.55	N	0.23	1.34	5.97	-0.220	-154.68	N
27	1.73	0.60	1.14	6.14	0.50	1.11	6.01	-0.128	-89.90	N	0.23	1.30	5.92	-0.215	-151.72	N
28	1.73	0.44	0.80	5.64	0.38	0.80	5.58	-0.058	-41.14	N	0.17	0.92	5.49	-0.153	-108.06	N
29	1.73	0.04	0.06	2.40	0.03	0.06	2.39	-0.007	-5.11	N	0.01	0.07	2.38	-0.015	-10.73	N
30	1.73	0.76	1.23	4.29	0.64	1.21	4.15	-0.143	-100.70	N	0.30	1.42	4.02	-0.278	-195.65	N
31	1.73	0.52	0.78	3.60	0.44	0.78	3.51	-0.089	-62.75	N	0.20	0.91	3.41	-0.191	-134.74	N
32	1.73	0.74	1.43	4.47	0.62	1.39	4.31	-0.155	-109.10	N	0.29	1.62	4.21	-0.258	-182.01	N

Table F8: Predicted Acid Deposition (keq/ha/yr)																
		2019 Base			2021						2031					
Receptor Number	CLO	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
33	1.73	0.59	0.96	3.85	0.49	0.94	3.72	-0.122	-85.74	N	0.22	1.09	3.61	-0.232	-163.65	N
34	1.73	0.59	1.10	3.98	0.49	1.07	3.86	-0.125	-87.78	N	0.22	1.24	3.77	-0.214	-150.63	N
35	1.73	0.43	0.77	3.50	0.36	0.78	3.45	-0.053	-37.18	N	0.16	0.92	3.39	-0.111	-78.02	N
36	1.73	0.35	0.62	3.27	0.30	0.63	3.23	-0.045	-31.37	N	0.13	0.74	3.18	-0.095	-66.68	N
37	1.73	0.45	0.81	3.55	0.38	0.82	3.50	-0.054	-38.04	N	0.17	0.97	3.44	-0.113	-79.61	N
38	1.73	0.34	0.61	3.25	0.29	0.62	3.21	-0.043	-30.56	N	0.13	0.73	3.16	-0.092	-64.92	N
39	1.73	0.09	0.14	2.53	0.07	0.14	2.51	-0.017	-12.08	N	0.03	0.17	2.50	-0.035	-24.44	N
40	1.73	0.07	0.11	2.48	0.06	0.11	2.46	-0.013	-9.11	N	0.02	0.13	2.45	-0.026	-18.19	N
41	1.73	0.36	0.63	3.29	0.30	0.65	3.25	-0.044	-31.17	N	0.14	0.76	3.20	-0.094	-66.27	N
42	1.73	0.44	0.80	5.64	0.37	0.81	5.59	-0.053	-37.26	N	0.17	0.96	5.53	-0.111	-78.17	N
43	1.73	0.45	0.81	5.66	0.38	0.83	5.61	-0.053	-37.67	N	0.17	0.98	5.55	-0.112	-78.99	N
44	1.594	0.19	0.47	2.95	0.16	0.47	2.92	-0.029	-4.05	N	0.07	0.55	2.92	-0.033	-4.62	N
45	1.594	0.20	0.49	1.89	0.17	0.49	1.86	-0.029	-4.11	N	0.07	0.58	1.85	-0.033	-4.67	N
46	1.73	0.37	1.02	2.69	0.31	0.99	2.61	-0.086	-12.09	N	0.14	1.16	2.60	-0.092	-12.87	N
47	1.73	0.51	0.99	3.80	0.42	0.96	3.69	-0.111	-78.50	N	0.19	1.12	3.61	-0.186	-131.03	N
48	1.73	0.54	1.05	3.59	0.45	1.02	3.47	-0.117	-82.35	N	0.20	1.19	3.39	-0.199	-139.83	N

Table F8: Predicted Acid Deposition (keq/ha/yr)																
		2019 Base			2021						2031					
Receptor Number	CLO	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
49	1.594	0.07	0.17	1.44	0.06	0.16	1.42	-0.017	-2.34	N	0.03	0.19	1.42	-0.023	-3.29	N
50	1.73	0.54	0.95	3.49	0.45	0.94	3.38	-0.109	-76.74	N	0.20	1.07	3.27	-0.222	-156.68	N
51	1.73	0.30	0.51	2.81	0.25	0.52	2.76	-0.048	-34.03	N	0.10	0.56	2.66	-0.146	-102.88	N
52	1.73	0.26	0.44	2.70	0.21	0.45	2.66	-0.042	-29.51	N	0.09	0.48	2.57	-0.128	-90.21	N
53	1.73	0.63	1.15	3.78	0.52	1.13	3.66	-0.127	-89.61	N	0.24	1.29	3.53	-0.252	-177.39	N
54	1.73	0.58	1.10	3.68	0.48	1.08	3.55	-0.122	-85.76	N	0.22	1.24	3.46	-0.216	-152.37	N
55	1.73	0.56	1.11	3.67	0.47	1.08	3.55	-0.123	-86.61	N	0.21	1.25	3.47	-0.204	-143.76	N
56	1.73	0.65	1.30	3.94	0.54	1.26	3.80	-0.140	-98.80	N	0.25	1.47	3.72	-0.227	-160.04	N
57	1.73	0.32	0.86	2.38	0.27	0.84	2.31	-0.075	-10.56	N	0.12	0.98	2.30	-0.084	-11.83	N
58	1.594	0.35	0.93	2.48	0.29	0.91	2.40	-0.081	-11.29	N	0.13	1.06	2.39	-0.089	-12.45	N
59	1.594	0.31	0.81	2.32	0.26	0.79	2.25	-0.072	-10.09	N	0.12	0.92	2.24	-0.082	-11.50	N
60	1.594	0.37	1.00	2.57	0.31	0.97	2.48	-0.086	-12.08	N	0.14	1.13	2.47	-0.094	-13.20	N
61	1.594	0.28	0.71	2.19	0.23	0.69	2.12	-0.065	-9.13	N	0.10	0.81	2.11	-0.077	-10.82	N
62	1.594	0.38	1.02	2.60	0.32	1.00	2.51	-0.088	-12.34	N	0.15	1.16	2.50	-0.096	-13.44	N
63	1.594	0.24	0.43	1.87	0.19	0.42	1.81	-0.054	-7.59	N	0.09	0.49	1.78	-0.090	-12.67	N
64	1.594	0.20	0.37	1.77	0.17	0.36	1.72	-0.045	-6.30	N	0.08	0.42	1.70	-0.074	-10.33	N

Table F8: Predicted Acid Deposition (keq/ha/yr)																
		2019 Base			2021						2031					
Receptor Number	CLO	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
65	1.73	0.99	1.49	4.49	0.83	1.46	4.28	-0.207	-145.64	N	0.39	1.70	4.09	-0.402	-282.92	N
66	1.73	0.80	1.62	4.42	0.67	1.58	4.25	-0.171	-120.64	N	0.31	1.84	4.15	-0.271	-191.10	N
67	1.73	0.77	1.57	4.34	0.65	1.53	4.17	-0.166	-117.02	N	0.30	1.78	4.08	-0.264	-185.99	N
68	1.594	0.34	0.91	2.46	0.29	0.89	2.38	-0.080	-11.20	N	0.13	1.04	2.37	-0.089	-12.53	N
69	1.594	0.42	1.15	2.77	0.35	1.12	2.67	-0.097	-13.55	N	0.16	1.30	2.67	-0.101	-14.20	N
70	1.594	0.33	0.88	2.41	0.28	0.86	2.33	-0.076	-10.59	N	0.13	1.00	2.32	-0.084	-11.76	N
71	1.594	0.33	0.63	2.16	0.28	0.63	2.11	-0.054	-7.57	N	0.13	0.74	2.07	-0.089	-12.43	N
72	1.594	0.36	0.70	2.26	0.30	0.69	2.19	-0.069	-9.67	N	0.14	0.81	2.15	-0.111	-15.51	N
73	1.594	0.31	0.59	2.10	0.26	0.59	2.05	-0.052	-7.31	N	0.12	0.69	2.01	-0.088	-12.29	N
74	1.594	0.18	0.42	1.80	0.15	0.42	1.77	-0.029	-4.11	N	0.07	0.49	1.76	-0.039	-5.40	N
75	1.594	0.28	0.67	2.15	0.24	0.68	2.11	-0.042	-5.86	N	0.11	0.80	2.10	-0.050	-6.99	N
76	1.594	0.18	0.41	1.79	0.15	0.42	1.77	-0.028	-3.94	N	0.07	0.49	1.76	-0.037	-5.24	N
77	1.594	0.23	0.54	1.97	0.19	0.54	1.93	-0.035	-4.85	N	0.09	0.64	1.92	-0.044	-6.16	N
78	1.73	0.27	0.47	2.74	0.23	0.47	2.70	-0.044	-30.96	N	0.10	0.55	2.65	-0.088	-62.29	N
79	1.594	0.40	0.78	2.38	0.33	0.77	2.30	-0.079	-11.05	N	0.16	0.90	2.26	-0.125	-17.48	N
80	1.594	0.29	0.74	2.23	0.24	0.72	2.16	-0.066	-9.24	N	0.11	0.84	2.15	-0.077	-10.82	N

Table F8: Predicted Acid Deposition (keq/ha/yr)																
		2019 Base			2021						2031					
Receptor Number	CLO	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
81	1.73	0.54	1.04	3.58	0.45	1.02	3.47	-0.116	-81.96	N	0.21	1.18	3.39	-0.195	-136.97	N
82	1.73	0.46	0.69	3.15	0.39	0.72	3.11	-0.034	-24.29	N	0.18	0.87	3.05	-0.094	-66.40	N
83	1.73	0.60	0.94	3.54	0.51	1.00	3.51	-0.024	-16.73	N	0.25	1.21	3.46	-0.082	-57.73	N
84	1.73	0.54	0.83	3.37	0.46	0.89	3.35	-0.022	-15.45	N	0.22	1.08	3.30	-0.077	-54.40	N
85	1.73	0.71	1.14	3.84	0.61	1.22	3.83	-0.019	-13.14	N	0.29	1.47	3.77	-0.076	-53.83	N
86	1.73	0.58	0.91	3.49	0.50	0.98	3.48	-0.020	-13.89	N	0.24	1.18	3.42	-0.075	-53.12	N
87	1.73	0.54	0.82	3.36	0.46	0.88	3.34	-0.019	-13.23	N	0.22	1.07	3.29	-0.073	-51.18	N
88	1.73	0.66	1.04	3.69	0.56	1.11	3.67	-0.019	-13.33	N	0.27	1.35	3.62	-0.076	-53.52	N
89	1.73	0.43	0.64	3.07	0.36	0.69	3.05	-0.018	-12.35	N	0.17	0.83	3.00	-0.065	-45.99	N
90	1.73	0.05	0.06	2.11	0.05	0.08	2.12	0.009	6.14	**Y**	0.03	0.11	2.13	0.019	13.32	**Y**
91	1.73	0.04	0.07	2.11	0.04	0.08	2.12	0.014	9.58	**Y**	0.02	0.12	2.14	0.031	21.83	**Y**
92	1.73	0.46	0.62	3.08	0.38	0.61	2.99	-0.094	-66.15	N	0.17	0.73	2.90	-0.185	-129.97	N
93	1.73	0.29	0.49	2.78	0.24	0.49	2.73	-0.046	-32.72	N	0.11	0.60	2.71	-0.067	-47.29	N
94	1.73	0.12	0.28	1.60	0.10	0.28	1.58	-0.020	-13.91	N	0.05	0.34	1.59	-0.013	-9.48	N
95	1.73	0.27	0.46	2.72	0.22	0.46	2.68	-0.041	-28.68	N	0.10	0.56	2.67	-0.058	-40.72	N
96	1.73	0.19	0.32	2.51	0.16	0.32	2.48	-0.030	-20.90	N	0.07	0.40	2.47	-0.043	-30.37	N

Table F8: Predicted Acid Deposition (keq/ha/yr)																
		2019 Base			2021						2031					
Receptor Number	CLO	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
97	1.73	0.34	0.59	2.93	0.29	0.59	2.88	-0.050	-34.89	N	0.13	0.73	2.86	-0.066	-46.48	N
98	1.73	0.26	0.44	2.70	0.22	0.45	2.66	-0.039	-27.22	N	0.10	0.55	2.65	-0.054	-37.91	N
99	1.73	0.26	0.44	2.70	0.22	0.45	2.67	-0.039	-27.22	N	0.10	0.55	2.65	-0.053	-37.67	N
100	1.73	0.03	0.04	4.47	0.02	0.04	4.46	-0.007	-4.77	N	0.01	0.05	4.46	-0.010	-7.24	N
101	1.73	0.03	0.04	4.47	0.02	0.04	4.47	-0.007	-5.00	N	0.01	0.05	4.46	-0.011	-7.50	N
102	1.73	0.02	0.03	2.24	0.01	0.03	2.24	-0.001	-1.04	N	0.01	0.03	2.24	-0.002	-1.08	N
103	1.73	0.02	0.03	2.25	0.02	0.04	2.25	-0.001	-1.03	N	0.01	0.04	2.25	-0.001	-0.94	N

Table F9: Predicted Acid Deposition in 2041 (keq/ha/yr)										
		2019 Base			2041					
Receptor Number	CLO	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
1	1.73	0.04	0.24	2.99	0.02	0.31	3.03	0.044	30.86	**Y**
2	1.73	0.02	0.12	2.84	0.01	0.16	2.87	0.022	15.18	**Y**
3	1.73	0.24	0.32	3.26	0.09	0.38	3.17	-0.091	-63.78	N
4	1.73	0.59	0.98	4.28	0.23	1.17	4.10	-0.175	-122.97	N
5	1.73	0.75	1.49	4.94	0.30	1.77	4.77	-0.166	-116.94	N
6	1.73	0.39	0.71	3.80	0.15	0.84	3.69	-0.105	-73.82	N
7	1.73	0.75	1.48	4.93	0.30	1.76	4.77	-0.166	-116.90	N
8	1.73	0.45	0.83	3.99	0.18	0.99	3.87	-0.120	-84.37	N
9	1.73	0.82	1.44	4.95	0.33	1.71	4.74	-0.215	-151.14	N
10	1.73	0.57	0.96	4.23	0.23	1.14	4.07	-0.167	-117.74	N
11	1.73	0.55	0.94	5.89	0.22	1.11	5.73	-0.152	-107.28	N
12	1.73	0.76	1.32	4.77	0.31	1.56	4.57	-0.204	-143.83	N
13	1.73	0.81	1.29	6.50	0.33	1.55	6.28	-0.215	-151.14	N
14	1.73	0.45	0.80	5.65	0.17	0.94	5.51	-0.136	-96.11	N
15	1.73	0.56	1.17	6.13	0.21	1.36	5.97	-0.158	-111.44	N

Table F9: Predicted Acid Deposition in 2041 (keq/ha/yr)										
		2019 Base			2041					
Receptor Number	CLO	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
16	1.73	0.10	0.18	4.68	0.04	0.22	4.65	-0.027	-19.01	N
17	1.73	0.55	1.20	6.15	0.20	1.39	5.99	-0.154	-108.15	N
18	1.73	0.84	1.97	7.21	0.32	2.28	7.00	-0.211	-148.76	N
19	1.73	1.14	2.81	8.35	0.44	3.26	8.10	-0.250	-175.99	N
20	1.73	1.08	2.66	8.14	0.42	3.08	7.90	-0.244	-171.48	N
21	1.73	0.69	1.55	6.64	0.26	1.80	6.46	-0.181	-127.30	N
22	1.73	0.50	1.00	5.90	0.19	1.16	5.75	-0.148	-103.98	N
23	1.73	0.64	1.03	6.07	0.25	1.22	5.88	-0.199	-139.88	N
24	1.73	0.58	1.14	6.12	0.23	1.35	5.98	-0.135	-94.76	N
25	1.73	0.13	0.24	4.77	0.05	0.28	4.73	-0.040	-28.42	N
26	1.73	0.61	1.18	6.19	0.24	1.40	6.04	-0.148	-104.47	N
27	1.73	0.60	1.14	6.14	0.24	1.36	5.99	-0.145	-102.14	N
28	1.73	0.44	0.80	5.64	0.17	0.96	5.53	-0.110	-77.53	N
29	1.73	0.04	0.06	2.40	0.01	0.07	2.38	-0.012	-8.53	N
30	1.73	0.76	1.23	4.29	0.31	1.48	4.09	-0.209	-146.99	N
31	1.73	0.52	0.78	3.60	0.21	0.94	3.45	-0.154	-108.37	N

Table F9: Predicted Acid Deposition in 2041 (keq/ha/yr)										
		2019 Base			2041					
Receptor Number	CLO	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
32	1.73	0.74	1.43	4.47	0.30	1.70	4.30	-0.171	-120.13	N
33	1.73	0.59	0.96	3.85	0.23	1.14	3.67	-0.173	-122.13	N
34	1.73	0.59	1.10	3.98	0.23	1.30	3.84	-0.146	-102.74	N
35	1.73	0.43	0.77	3.50	0.17	0.95	3.42	-0.080	-56.23	N
36	1.73	0.35	0.62	3.27	0.14	0.77	3.20	-0.070	-49.00	N
37	1.73	0.45	0.81	3.55	0.18	1.00	3.47	-0.081	-56.89	N
38	1.73	0.34	0.61	3.25	0.13	0.75	3.18	-0.068	-47.79	N
39	1.73	0.09	0.14	2.53	0.03	0.17	2.50	-0.027	-19.24	N
40	1.73	0.07	0.11	2.48	0.03	0.13	2.46	-0.020	-14.17	N
41	1.73	0.36	0.63	3.29	0.14	0.78	3.22	-0.069	-48.63	N
42	1.73	0.44	0.80	5.64	0.17	0.99	5.56	-0.079	-55.97	N
43	1.73	0.45	0.81	5.66	0.18	1.01	5.58	-0.080	-56.37	N
44	1.594	0.19	0.47	2.95	0.07	0.57	2.94	-0.014	-1.94	N
45	1.594	0.20	0.49	1.89	0.08	0.60	1.87	-0.013	-1.85	N
46	1.73	0.37	1.02	2.69	0.15	1.21	2.66	-0.030	-4.24	N
47	1.73	0.51	0.99	3.80	0.20	1.18	3.68	-0.124	-87.26	N

Table F9: Predicted Acid Deposition in 2041 (keq/ha/yr)										
		2019 Base			2041					
Receptor Number	CLO	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
48	1.73	0.54	1.05	3.59	0.21	1.24	3.46	-0.134	-94.30	N
49	1.594	0.07	0.17	1.44	0.03	0.20	1.43	-0.014	-1.91	N
50	1.73	0.54	0.95	3.49	0.20	1.11	3.32	-0.172	-121.45	N
51	1.73	0.30	0.51	2.81	0.10	0.57	2.68	-0.134	-94.33	N
52	1.73	0.26	0.44	2.70	0.09	0.49	2.58	-0.118	-82.99	N
53	1.73	0.63	1.15	3.78	0.24	1.35	3.59	-0.190	-134.00	N
54	1.73	0.58	1.10	3.68	0.23	1.30	3.53	-0.151	-106.42	N
55	1.73	0.56	1.11	3.67	0.22	1.31	3.54	-0.135	-94.81	N
56	1.73	0.65	1.30	3.94	0.26	1.54	3.80	-0.146	-102.71	N
57	1.73	0.32	0.86	2.38	0.13	1.02	2.35	-0.032	-4.49	N
58	1.594	0.35	0.93	2.48	0.14	1.11	2.45	-0.032	-4.53	N
59	1.594	0.31	0.81	2.32	0.12	0.96	2.29	-0.033	-4.57	N
60	1.594	0.37	1.00	2.57	0.15	1.19	2.53	-0.034	-4.71	N
61	1.594	0.28	0.71	2.19	0.11	0.84	2.15	-0.034	-4.71	N
62	1.594	0.38	1.02	2.60	0.15	1.21	2.57	-0.034	-4.71	N
63	1.594	0.24	0.43	1.87	0.09	0.52	1.81	-0.061	-8.51	N

Table F9: Predicted Acid Deposition in 2041 (keq/ha/yr)										
		2019 Base			2041					
Receptor Number	CLO	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
64	1.594	0.20	0.37	1.77	0.08	0.45	1.73	-0.044	-6.09	N
65	1.73	0.99	1.49	4.49	0.41	1.78	4.19	-0.300	-211.14	N
66	1.73	0.80	1.62	4.42	0.32	1.93	4.25	-0.168	-118.34	N
67	1.73	0.77	1.57	4.34	0.31	1.86	4.17	-0.165	-116.27	N
68	1.594	0.34	0.91	2.46	0.14	1.09	2.42	-0.033	-4.69	N
69	1.594	0.42	1.15	2.77	0.17	1.37	2.74	-0.031	-4.40	N
70	1.594	0.33	0.88	2.41	0.13	1.05	2.38	-0.030	-4.20	N
71	1.594	0.33	0.63	2.16	0.14	0.78	2.12	-0.044	-6.16	N
72	1.594	0.36	0.70	2.26	0.15	0.84	2.19	-0.067	-9.41	N
73	1.594	0.31	0.59	2.10	0.12	0.72	2.04	-0.057	-7.93	N
74	1.594	0.18	0.42	1.80	0.07	0.51	1.78	-0.019	-2.69	N
75	1.594	0.28	0.67	2.15	0.11	0.82	2.13	-0.022	-3.05	N
76	1.594	0.18	0.41	1.79	0.07	0.51	1.77	-0.020	-2.81	N
77	1.594	0.23	0.54	1.97	0.09	0.65	1.94	-0.022	-3.06	N
78	1.73	0.27	0.47	2.74	0.11	0.57	2.67	-0.068	-48.06	N
79	1.594	0.40	0.78	2.38	0.16	0.94	2.31	-0.074	-10.39	N

Table F9: Predicted Acid Deposition in 2041 (keq/ha/yr)										
		2019 Base			2041					
Receptor Number	CLO	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
80	1.594	0.29	0.74	2.23	0.11	0.88	2.19	-0.032	-4.42	N
81	1.73	0.54	1.04	3.58	0.21	1.24	3.46	-0.128	-90.13	N
82	1.73	0.46	0.69	3.15	0.19	0.93	3.12	-0.025	-17.73	N
83	1.73	0.60	0.94	3.54	0.26	1.29	3.55	0.011	7.85	**Y**
84	1.73	0.54	0.83	3.37	0.23	1.15	3.38	0.006	4.09	**Y**
85	1.73	0.71	1.14	3.84	0.31	1.57	3.88	0.037	26.35	**Y**
86	1.73	0.58	0.91	3.49	0.25	1.26	3.51	0.016	11.29	**Y**
87	1.73	0.54	0.82	3.36	0.23	1.14	3.37	0.011	7.70	**Y**
88	1.73	0.66	1.04	3.69	0.29	1.44	3.72	0.029	20.66	**Y**
89	1.73	0.43	0.64	3.07	0.18	0.89	3.07	0.001	0.41	N
90	1.73	0.05	0.06	2.11	0.04	0.17	2.21	0.093	65.72	**Y**
91	1.73	0.04	0.07	2.11	0.03	0.19	2.22	0.113	79.67	**Y**
92	1.73	0.46	0.62	3.08	0.18	0.78	2.96	-0.121	-85.06	N
93	1.73	0.29	0.49	2.78	0.12	0.66	2.79	0.011	7.66	**Y**
94	1.73	0.12	0.28	1.60	0.05	0.38	1.63	0.029	20.59	**Y**
95	1.73	0.27	0.46	2.72	0.12	0.63	2.74	0.018	12.73	**Y**

Table F9: Predicted Acid Deposition in 2041 (keq/ha/yr)										
		2019 Base			2041					
Receptor Number	CLO	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
96	1.73	0.19	0.32	2.51	0.08	0.44	2.52	0.010	7.28	**Y**
97	1.73	0.34	0.59	2.93	0.15	0.82	2.97	0.035	24.76	**Y**
98	1.73	0.26	0.44	2.70	0.11	0.61	2.72	0.022	15.21	**Y**
99	1.73	0.26	0.44	2.70	0.11	0.61	2.73	0.023	16.03	**Y**
100	1.73	0.03	0.04	4.47	0.01	0.05	4.46	-0.008	-5.85	N
101	1.73	0.03	0.04	4.47	0.01	0.05	4.47	-0.009	-6.04	N
102	1.73	0.02	0.03	2.24	0.01	0.04	2.25	0.002	1.72	**Y**
103	1.73	0.02	0.03	2.25	0.01	0.05	2.26	0.004	2.89	**Y**

Table F10: Predicted Acid Deposition during 2021 and 2031 (keq/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
1a	0.04	0.24	2.99	0.04	0.25	2.99	0.003	0.18	N	0.02	0.30	3.02	0.033	1.93	**Y**
1b	0.04	0.21	2.95	0.03	0.22	2.95	0.002	0.14	N	0.01	0.26	2.98	0.029	1.65	**Y**
1c	0.03	0.18	2.92	0.03	0.19	2.92	0.002	0.12	N	0.01	0.23	2.94	0.025	1.45	**Y**
1d	0.03	0.16	2.89	0.02	0.17	2.89	0.002	0.11	N	0.01	0.20	2.91	0.022	1.27	**Y**
1e	0.03	0.15	2.87	0.02	0.15	2.87	0.002	0.09	N	0.01	0.18	2.89	0.020	1.14	**Y**
1f	0.02	0.13	2.86	0.02	0.14	2.86	0.001	0.08	N	0.01	0.16	2.87	0.017	1.01	**Y**
1g	0.02	0.12	2.84	0.02	0.12	2.84	0.001	0.07	N	0.01	0.15	2.86	0.016	0.92	N
1h	0.02	0.11	2.83	0.02	0.11	2.83	0.001	0.06	N	0.01	0.14	2.84	0.014	0.82	N
1i	0.02	0.10	2.82	0.02	0.10	2.82	0.001	0.05	N	0.01	0.13	2.83	0.013	0.75	N
1j	0.02	0.09	2.81	0.01	0.10	2.81	0.001	0.05	N	0.01	0.12	2.82	0.012	0.70	N
1k	0.02	0.09	2.80	0.01	0.09	2.80	0.001	0.03	N	0.01	0.11	2.81	0.011	0.63	N
2a	0.02	0.12	2.84	0.02	0.13	2.85	0.001	0.07	N	0.01	0.15	2.86	0.016	0.94	N
2b	0.02	0.11	2.83	0.02	0.12	2.84	0.001	0.07	N	0.01	0.14	2.85	0.015	0.86	N
2c	0.02	0.11	2.82	0.02	0.11	2.83	0.001	0.06	N	0.01	0.13	2.84	0.014	0.80	N
2d	0.02	0.10	2.82	0.01	0.10	2.82	0.001	0.05	N	0.01	0.12	2.83	0.013	0.73	N
2e	0.02	0.09	2.81	0.01	0.10	2.81	0.001	0.05	N	0.01	0.11	2.82	0.012	0.68	N

Table F10: Predicted Acid Deposition during 2021 and 2031 (keq/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
2f	0.02	0.09	2.80	0.01	0.09	2.80	0.001	0.05	N	0.01	0.11	2.81	0.011	0.63	N
2g	0.01	0.08	2.80	0.01	0.08	2.80	0.001	0.03	N	0.01	0.10	2.81	0.010	0.59	N
2h	0.01	0.08	2.79	0.01	0.08	2.79	0.001	0.03	N	0.01	0.09	2.80	0.009	0.55	N
2i	0.01	0.07	2.79	0.01	0.07	2.79	0.001	0.03	N	0.00	0.09	2.79	0.009	0.52	N
2j	0.01	0.07	2.78	0.01	0.07	2.78	0.000	0.02	N	0.00	0.08	2.79	0.008	0.49	N
2k	0.01	0.06	2.78	0.01	0.07	2.78	0.000	0.01	N	0.00	0.08	2.78	0.008	0.45	N
83a	0.60	0.94	3.54	0.51	1.00	3.51	-0.026	-1.50	N	0.25	1.21	3.46	-0.075	-4.34	N
83b	0.25	0.37	2.62	0.21	0.39	2.60	-0.018	-1.04	N	0.10	0.47	2.57	-0.050	-2.86	N
83c	0.16	0.23	2.40	0.14	0.25	2.38	-0.014	-0.79	N	0.06	0.30	2.36	-0.036	-2.07	N
83d	0.12	0.18	2.30	0.10	0.19	2.29	-0.012	-0.67	N	0.05	0.23	2.27	-0.029	-1.70	N
83e	0.10	0.14	2.24	0.08	0.15	2.23	-0.010	-0.56	N	0.04	0.18	2.22	-0.024	-1.41	N
83f	0.12	0.17	2.29	0.10	0.18	2.28	-0.013	-0.75	N	0.05	0.21	2.26	-0.030	-1.76	N
83g	0.07	0.11	2.18	0.06	0.11	2.17	-0.008	-0.47	N	0.03	0.13	2.16	-0.020	-1.13	N
83h	0.07	0.10	2.16	0.05	0.10	2.15	-0.007	-0.42	N	0.03	0.12	2.14	-0.017	-1.01	N
83i	0.06	0.09	2.15	0.05	0.09	2.14	-0.007	-0.39	N	0.02	0.11	2.13	-0.016	-0.94	N
83j	0.05	0.08	2.13	0.05	0.08	2.13	-0.006	-0.36	N	0.02	0.10	2.12	-0.015	-0.86	N
83k	0.05	0.07	2.12	0.04	0.08	2.12	-0.006	-0.34	N	0.02	0.09	2.11	-0.014	-0.81	N

Table F10: Predicted Acid Deposition during 2021 and 2031 (keq/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
84a	0.54	0.83	3.38	0.46	0.89	3.35	-0.024	-1.39	N	0.23	1.08	3.30	-0.072	-4.13	N
84b	0.47	0.71	3.17	0.40	0.76	3.15	-0.022	-1.27	N	0.19	0.91	3.11	-0.067	-3.86	N
84c	0.23	0.34	2.57	0.20	0.36	2.56	-0.015	-0.87	N	0.09	0.44	2.53	-0.044	-2.54	N
84d	0.16	0.23	2.38	0.13	0.24	2.37	-0.012	-0.66	N	0.06	0.29	2.35	-0.032	-1.88	N
84e	0.12	0.17	2.29	0.10	0.18	2.28	-0.009	-0.54	N	0.05	0.22	2.27	-0.026	-1.50	N
84f	0.10	0.14	2.24	0.08	0.15	2.23	-0.008	-0.47	N	0.04	0.18	2.22	-0.022	-1.27	N
84g	0.08	0.12	2.20	0.07	0.12	2.19	-0.007	-0.42	N	0.03	0.15	2.18	-0.019	-1.12	N
84h	0.07	0.10	2.18	0.06	0.11	2.17	-0.007	-0.38	N	0.03	0.13	2.16	-0.017	-0.98	N
84i	0.06	0.09	2.16	0.05	0.10	2.15	-0.006	-0.35	N	0.02	0.12	2.14	-0.016	-0.90	N
84j	0.06	0.08	2.14	0.05	0.09	2.14	-0.006	-0.32	N	0.02	0.10	2.13	-0.014	-0.82	N
84k	0.05	0.08	2.13	0.04	0.08	2.12	-0.005	-0.30	N	0.02	0.10	2.12	-0.013	-0.76	N
85a	0.71	1.14	3.84	0.61	1.22	3.82	-0.019	-1.10	N	0.30	1.47	3.78	-0.065	-3.74	N
85b	0.27	0.40	2.67	0.23	0.42	2.65	-0.014	-0.83	N	0.11	0.51	2.62	-0.046	-2.65	N
85c	0.17	0.24	2.41	0.14	0.26	2.40	-0.010	-0.60	N	0.07	0.31	2.38	-0.032	-1.84	N
85d	0.13	0.18	2.30	0.11	0.19	2.30	-0.008	-0.48	N	0.05	0.23	2.28	-0.025	-1.45	N
85e	0.10	0.14	2.24	0.08	0.15	2.24	-0.007	-0.41	N	0.04	0.18	2.22	-0.021	-1.21	N
85f	0.09	0.12	2.21	0.07	0.13	2.20	-0.006	-0.35	N	0.03	0.15	2.19	-0.018	-1.05	N

Table F10: Predicted Acid Deposition during 2021 and 2031 (keq/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
85g	0.07	0.10	2.18	0.06	0.11	2.17	-0.006	-0.33	N	0.03	0.13	2.16	-0.016	-0.93	N
85h	0.07	0.09	2.16	0.05	0.10	2.15	-0.005	-0.29	N	0.03	0.12	2.14	-0.014	-0.84	N
85i	0.06	0.08	2.14	0.05	0.09	2.14	-0.005	-0.28	N	0.02	0.11	2.13	-0.013	-0.77	N
85j	0.00	0.00	2.00	0.00	0.00	2.00	0.000	0.00	N	0.00	0.00	2.00	0.000	-0.02	N
85k	0.05	0.07	2.12	0.04	0.07	2.12	-0.004	-0.24	N	0.02	0.09	2.11	-0.012	-0.67	N
86a	0.58	0.91	3.49	0.50	0.98	3.47	-0.020	-1.15	N	0.25	1.18	3.43	-0.067	-3.85	N
86b	0.21	0.30	2.50	0.17	0.32	2.49	-0.012	-0.67	N	0.08	0.38	2.47	-0.037	-2.14	N
86c	0.15	0.21	2.36	0.12	0.22	2.35	-0.009	-0.52	N	0.06	0.27	2.33	-0.028	-1.61	N
86d	0.11	0.16	2.28	0.10	0.17	2.27	-0.007	-0.43	N	0.04	0.21	2.25	-0.023	-1.31	N
86e	0.10	0.13	2.23	0.08	0.14	2.22	-0.006	-0.35	N	0.04	0.17	2.21	-0.019	-1.10	N
86f	0.08	0.12	2.20	0.07	0.12	2.19	-0.005	-0.31	N	0.03	0.15	2.18	-0.017	-0.97	N
86g	0.07	0.10	2.17	0.06	0.11	2.17	-0.005	-0.29	N	0.03	0.13	2.16	-0.015	-0.86	N
86h	0.06	0.09	2.16	0.05	0.10	2.15	-0.005	-0.27	N	0.03	0.12	2.14	-0.014	-0.79	N
86i	0.06	0.08	2.14	0.05	0.09	2.14	-0.004	-0.24	N	0.02	0.11	2.13	-0.013	-0.73	N
86j	0.05	0.08	2.13	0.05	0.08	2.13	-0.004	-0.23	N	0.02	0.10	2.12	-0.012	-0.68	N
86k	0.05	0.07	2.12	0.04	0.08	2.12	-0.004	-0.22	N	0.02	0.09	2.11	-0.011	-0.64	N
87a	0.53	0.82	3.36	0.46	0.88	3.34	-0.019	-1.11	N	0.22	1.07	3.29	-0.065	-3.75	N

Table F10: Predicted Acid Deposition during 2021 and 2031 (keq/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
87b	0.23	0.33	2.56	0.19	0.35	2.54	-0.012	-0.71	N	0.09	0.43	2.52	-0.040	-2.29	N
87c	0.14	0.20	2.35	0.12	0.22	2.34	-0.008	-0.49	N	0.06	0.26	2.32	-0.027	-1.57	N
87d	0.11	0.15	2.25	0.09	0.16	2.25	-0.007	-0.38	N	0.04	0.19	2.23	-0.021	-1.19	N
87e	0.08	0.12	2.20	0.07	0.12	2.19	-0.005	-0.31	N	0.03	0.15	2.18	-0.017	-0.97	N
87f	0.07	0.10	2.16	0.06	0.10	2.16	-0.005	-0.28	N	0.03	0.12	2.15	-0.014	-0.82	N
87g	0.06	0.08	2.14	0.05	0.09	2.14	-0.004	-0.24	N	0.02	0.10	2.13	-0.012	-0.71	N
87h	0.05	0.07	2.12	0.04	0.08	2.12	-0.004	-0.21	N	0.02	0.09	2.11	-0.011	-0.63	N
87i	0.04	0.06	2.11	0.04	0.07	2.10	-0.003	-0.19	N	0.02	0.08	2.10	-0.010	-0.57	N
87j	0.04	0.06	2.10	0.03	0.06	2.09	-0.003	-0.17	N	0.02	0.07	2.09	-0.009	-0.51	N
87k	0.04	0.05	2.09	0.03	0.05	2.08	-0.003	-0.16	N	0.01	0.07	2.08	-0.008	-0.47	N
88a	0.65	1.04	3.69	0.56	1.11	3.67	-0.019	-1.11	N	0.28	1.35	3.63	-0.066	-3.79	N
88b	0.21	0.30	2.51	0.18	0.32	2.50	-0.012	-0.67	N	0.08	0.39	2.48	-0.037	-2.14	N
88c	0.13	0.18	2.31	0.11	0.19	2.30	-0.008	-0.43	N	0.05	0.23	2.28	-0.024	-1.39	N
88d	0.09	0.13	2.22	0.08	0.14	2.22	-0.006	-0.34	N	0.04	0.17	2.20	-0.018	-1.04	N
88e	0.07	0.10	2.17	0.06	0.11	2.17	-0.005	-0.28	N	0.03	0.13	2.16	-0.015	-0.84	N
88f	0.06	0.08	2.14	0.05	0.09	2.14	-0.004	-0.23	N	0.02	0.11	2.13	-0.012	-0.71	N
88g	0.05	0.07	2.12	0.04	0.08	2.12	-0.004	-0.21	N	0.02	0.09	2.11	-0.011	-0.61	N

Table F10: Predicted Acid Deposition during 2021 and 2031 (keq/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
88h	0.04	0.06	2.11	0.04	0.07	2.10	-0.003	-0.19	N	0.02	0.08	2.10	-0.010	-0.55	N
88i	0.04	0.06	2.10	0.03	0.06	2.09	-0.003	-0.17	N	0.02	0.07	2.09	-0.008	-0.49	N
88j	0.04	0.05	2.09	0.03	0.05	2.08	-0.003	-0.17	N	0.01	0.07	2.08	-0.008	-0.45	N
88k	0.03	0.05	2.08	0.03	0.05	2.08	-0.003	-0.15	N	0.01	0.06	2.07	-0.007	-0.41	N
89a	0.43	0.64	3.07	0.36	0.69	3.05	-0.018	-1.04	N	0.18	0.83	3.01	-0.060	-3.44	N
89b	0.18	0.25	2.43	0.15	0.27	2.42	-0.010	-0.58	N	0.07	0.33	2.40	-0.032	-1.86	N
89c	0.11	0.16	2.27	0.10	0.17	2.27	-0.007	-0.40	N	0.04	0.21	2.25	-0.022	-1.26	N
89d	0.08	0.12	2.20	0.07	0.13	2.20	-0.005	-0.32	N	0.03	0.15	2.18	-0.017	-0.96	N
89e	0.07	0.09	2.16	0.06	0.10	2.16	-0.005	-0.26	N	0.03	0.12	2.15	-0.014	-0.79	N
89f	0.06	0.08	2.13	0.05	0.08	2.13	-0.004	-0.22	N	0.02	0.10	2.12	-0.012	-0.67	N
89g	0.05	0.07	2.11	0.04	0.07	2.11	-0.003	-0.20	N	0.02	0.09	2.10	-0.010	-0.57	N
89h	0.04	0.06	2.10	0.03	0.06	2.10	-0.003	-0.17	N	0.02	0.08	2.09	-0.009	-0.50	N
89i	0.04	0.05	2.09	0.03	0.06	2.09	-0.003	-0.16	N	0.01	0.07	2.08	-0.008	-0.46	N
89j	0.03	0.05	2.08	0.03	0.05	2.08	-0.003	-0.16	N	0.01	0.06	2.07	-0.007	-0.41	N
89k	0.03	0.04	2.07	0.03	0.05	2.07	-0.002	-0.14	N	0.01	0.06	2.07	-0.006	-0.37	N
90a	0.05	0.06	2.11	0.05	0.08	2.12	0.009	0.52	N	0.03	0.11	2.13	0.019	1.12	**Y**
90b	0.03	0.04	2.08	0.03	0.05	2.08	0.004	0.21	N	0.01	0.07	2.08	0.008	0.46	N

Table F10: Predicted Acid Deposition during 2021 and 2031 (keq/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
90c	0.03	0.04	2.06	0.02	0.04	2.07	0.002	0.14	N	0.01	0.06	2.07	0.005	0.30	N
90d	0.02	0.03	2.06	0.02	0.04	2.06	0.002	0.09	N	0.01	0.05	2.06	0.003	0.20	N
90e	0.02	0.03	2.05	0.02	0.03	2.05	0.001	0.05	N	0.01	0.05	2.05	0.002	0.13	N
90f	0.02	0.03	2.05	0.02	0.03	2.05	0.001	0.04	N	0.01	0.04	2.05	0.002	0.10	N
90g	0.02	0.03	2.05	0.02	0.03	2.05	0.000	0.03	N	0.01	0.04	2.05	0.001	0.07	N
90h	0.02	0.03	2.05	0.02	0.03	2.05	0.000	0.03	N	0.01	0.04	2.05	0.001	0.05	N
90i	0.02	0.03	2.05	0.02	0.03	2.05	0.000	0.02	N	0.01	0.04	2.05	0.001	0.04	N
90j	0.02	0.03	2.04	0.02	0.03	2.04	0.000	0.01	N	0.01	0.04	2.04	0.000	0.02	N
90k	0.02	0.03	2.04	0.01	0.03	2.04	0.000	0.00	N	0.01	0.04	2.04	0.000	0.01	N
91a	0.04	0.07	2.11	0.04	0.08	2.12	0.013	0.74	N	0.02	0.12	2.14	0.031	1.79	**Y**
91b	0.02	0.03	2.06	0.02	0.04	2.06	0.003	0.15	N	0.01	0.05	2.06	0.007	0.43	N
91c	0.02	0.03	2.04	0.01	0.03	2.05	0.000	0.02	N	0.01	0.04	2.05	0.002	0.11	N
91d	0.02	0.02	2.04	0.01	0.03	2.04	-0.001	-0.05	N	0.01	0.03	2.04	0.000	-0.02	N
91e	0.02	0.02	2.04	0.01	0.02	2.04	-0.001	-0.07	N	0.01	0.03	2.04	-0.001	-0.08	N
91f	0.01	0.02	2.04	0.01	0.02	2.04	-0.002	-0.09	N	0.01	0.03	2.04	-0.002	-0.14	N
91g	0.01	0.02	2.04	0.01	0.02	2.04	-0.002	-0.10	N	0.01	0.03	2.03	-0.003	-0.15	N
91h	0.01	0.02	2.04	0.01	0.02	2.03	-0.002	-0.11	N	0.01	0.03	2.03	-0.003	-0.18	N

Table F10: Predicted Acid Deposition during 2021 and 2031 (keq/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
91j	0.01	0.02	2.04	0.01	0.02	2.03	-0.002	-0.12	N	0.01	0.03	2.03	-0.003	-0.19	N
91i	0.01	0.02	2.04	0.01	0.02	2.03	-0.002	-0.13	N	0.01	0.03	2.03	-0.004	-0.21	N
91k	0.01	0.02	2.04	0.01	0.02	2.03	-0.002	-0.13	N	0.01	0.03	2.03	-0.004	-0.21	N
93a	0.29	0.49	2.77	0.24	0.49	2.73	-0.045	-2.63	N	0.11	0.60	2.71	-0.063	-3.62	N
93b	0.14	0.22	2.35	0.11	0.22	2.33	-0.025	-1.42	N	0.05	0.26	2.31	-0.039	-2.24	N
93c	0.10	0.17	2.27	0.08	0.16	2.25	-0.020	-1.16	N	0.04	0.20	2.24	-0.033	-1.89	N
93d	0.09	0.15	2.24	0.07	0.14	2.22	-0.018	-1.06	N	0.03	0.17	2.21	-0.031	-1.77	N
93e	0.08	0.13	2.22	0.07	0.13	2.20	-0.017	-1.00	N	0.03	0.16	2.19	-0.029	-1.68	N
93f	0.00	0.00	2.00	0.00	0.00	2.00	-0.001	-0.04	N	0.00	0.00	2.00	0.000	-0.02	N
93g	0.08	0.13	2.20	0.06	0.12	2.19	-0.017	-0.97	N	0.03	0.15	2.17	-0.029	-1.65	N
93h	0.08	0.12	2.20	0.06	0.12	2.18	-0.016	-0.95	N	0.03	0.14	2.17	-0.028	-1.63	N
93i	0.08	0.12	2.20	0.06	0.12	2.18	-0.017	-0.96	N	0.03	0.14	2.17	-0.028	-1.63	N
93j	0.07	0.12	2.20	0.06	0.12	2.18	-0.016	-0.95	N	0.03	0.14	2.17	-0.028	-1.61	N
93k	0.07	0.12	2.19	0.06	0.12	2.18	-0.016	-0.94	N	0.03	0.14	2.17	-0.028	-1.60	N
94a	0.25	0.42	1.86	0.10	0.28	1.58	-0.282	-16.30	N	0.05	0.34	1.59	-0.274	-15.86	N
94b	0.10	0.16	1.45	0.04	0.10	1.34	-0.109	-6.32	N	0.02	0.12	1.34	-0.109	-6.32	N
94c	0.07	0.11	1.38	0.03	0.07	1.30	-0.080	-4.65	N	0.01	0.09	1.30	-0.081	-4.71	N

Table F10: Predicted Acid Deposition during 2021 and 2031 (keq/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
94d	0.06	0.09	1.35	0.02	0.06	1.29	-0.067	-3.89	N	0.01	0.07	1.28	-0.069	-3.96	N
94e	0.05	0.08	1.33	0.02	0.05	1.28	-0.059	-3.44	N	0.01	0.06	1.27	-0.061	-3.53	N
94f	0.05	0.07	1.32	0.02	0.05	1.27	-0.054	-3.12	N	0.01	0.06	1.27	-0.056	-3.21	N
94g	0.04	0.07	1.31	0.02	0.04	1.26	-0.050	-2.91	N	0.01	0.05	1.26	-0.052	-3.00	N
94h	0.04	0.06	1.31	0.02	0.04	1.26	-0.047	-2.70	N	0.01	0.05	1.26	-0.048	-2.80	N
94i	0.04	0.06	1.30	0.02	0.04	1.25	-0.044	-2.54	N	0.01	0.05	1.25	-0.045	-2.63	N
94j	0.04	0.06	1.29	0.01	0.04	1.25	-0.041	-2.40	N	0.01	0.04	1.25	-0.043	-2.48	N
94k	0.04	0.05	1.29	0.01	0.03	1.25	-0.039	-2.28	N	0.01	0.04	1.25	-0.041	-2.37	N
95a	0.27	0.46	2.72	0.22	0.31	2.53	-0.194	-11.19	N	0.11	0.56	2.67	-0.054	-3.14	N
95b	0.12	0.19	2.31	0.10	0.13	2.23	-0.085	-4.92	N	0.05	0.24	2.28	-0.030	-1.72	N
95c	0.08	0.14	2.22	0.07	0.09	2.16	-0.061	-3.55	N	0.03	0.17	2.20	-0.024	-1.37	N
95d	0.07	0.12	2.19	0.06	0.08	2.14	-0.052	-3.01	N	0.03	0.14	2.17	-0.021	-1.24	N
95e	0.06	0.11	2.17	0.05	0.07	2.12	-0.048	-2.75	N	0.02	0.13	2.15	-0.021	-1.19	N
95f	0.06	0.10	2.16	0.05	0.07	2.12	-0.046	-2.67	N	0.02	0.12	2.14	-0.021	-1.19	N
95g	0.06	0.10	2.16	0.05	0.07	2.12	-0.046	-2.66	N	0.02	0.12	2.14	-0.021	-1.24	N
95h	0.06	0.10	2.17	0.05	0.07	2.12	-0.047	-2.74	N	0.02	0.12	2.14	-0.023	-1.31	N
95i	0.07	0.11	2.18	0.05	0.07	2.13	-0.050	-2.91	N	0.02	0.13	2.15	-0.024	-1.41	N

Table F10: Predicted Acid Deposition during 2021 and 2031 (keq/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
95j	0.07	0.12	2.19	0.06	0.08	2.14	-0.054	-3.15	N	0.03	0.14	2.16	-0.027	-1.56	N
95k	0.08	0.13	2.21	0.07	0.09	2.15	-0.061	-3.54	N	0.03	0.15	2.18	-0.031	-1.78	N
97a	0.34	0.59	2.93	0.29	0.40	2.68	-0.247	-14.29	N	0.14	0.73	2.87	-0.061	-3.54	N
97b	0.11	0.19	2.30	0.09	0.12	2.22	-0.081	-4.65	N	0.04	0.23	2.27	-0.026	-1.50	N
97c	0.07	0.12	2.19	0.06	0.08	2.14	-0.052	-3.01	N	0.03	0.15	2.17	-0.018	-1.05	N
97d	0.06	0.09	2.15	0.05	0.06	2.11	-0.040	-2.34	N	0.02	0.11	2.13	-0.015	-0.85	N
97e	0.05	0.08	2.12	0.04	0.05	2.09	-0.034	-1.97	N	0.02	0.09	2.11	-0.013	-0.75	N
97f	0.04	0.07	2.11	0.03	0.04	2.08	-0.030	-1.73	N	0.02	0.08	2.10	-0.012	-0.69	N
97g	0.04	0.06	2.10	0.03	0.04	2.07	-0.028	-1.59	N	0.01	0.07	2.09	-0.011	-0.65	N
97h	0.03	0.06	2.09	0.03	0.04	2.07	-0.026	-1.49	N	0.01	0.07	2.08	-0.011	-0.63	N
97i	0.03	0.05	2.09	0.03	0.04	2.06	-0.024	-1.40	N	0.01	0.06	2.08	-0.010	-0.60	N
97j	0.00	0.00	2.00	0.00	0.00	2.00	-0.001	-0.04	N	0.00	0.00	2.00	0.000	-0.02	N
97k	0.03	0.05	2.08	0.02	0.03	2.06	-0.022	-1.28	N	0.01	0.06	2.07	-0.010	-0.57	N
98a	0.26	0.44	2.70	0.22	0.30	2.51	-0.187	-10.80	N	0.10	0.55	2.65	-0.050	-2.91	N
98b	0.08	0.13	2.20	0.06	0.08	2.15	-0.055	-3.17	N	0.03	0.15	2.18	-0.018	-1.07	N
98c	0.05	0.08	2.13	0.04	0.05	2.10	-0.036	-2.09	N	0.02	0.10	2.12	-0.013	-0.76	N
98d	0.04	0.06	2.10	0.03	0.04	2.07	-0.028	-1.62	N	0.01	0.08	2.09	-0.011	-0.61	N

Table F10: Predicted Acid Deposition during 2021 and 2031 (keq/ha/yr)															
	2019 Base			2021						2031					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan (PC)[2]	change as % of CL	Impact >1% of CL (Y/N)
98e	0.03	0.05	2.09	0.03	0.04	2.06	-0.024	-1.39	N	0.01	0.06	2.08	-0.009	-0.55	N
98f	0.03	0.05	2.07	0.02	0.03	2.05	-0.021	-1.20	N	0.01	0.06	2.07	-0.008	-0.49	N
98g	0.03	0.04	2.07	0.02	0.03	2.05	-0.019	-1.09	N	0.01	0.05	2.06	-0.008	-0.45	N
98h	0.02	0.04	2.06	0.02	0.03	2.04	-0.017	-1.00	N	0.01	0.05	2.05	-0.007	-0.42	N
98i	0.02	0.04	2.06	0.02	0.02	2.04	-0.016	-0.93	N	0.01	0.04	2.05	-0.007	-0.41	N
98j	0.02	0.03	2.05	0.02	0.02	2.04	-0.015	-0.89	N	0.01	0.04	2.05	-0.007	-0.40	N
98k	0.02	0.03	2.05	0.02	0.02	2.04	-0.014	-0.83	N	0.01	0.04	2.04	-0.007	-0.38	N
99a	0.26	0.44	2.70	0.22	0.30	2.52	-0.188	-10.84	N	0.10	0.55	2.65	-0.050	-2.90	N
99b	0.10	0.16	2.26	0.08	0.11	2.19	-0.071	-4.10	N	0.04	0.20	2.24	-0.023	-1.33	N
99c	0.06	0.10	2.17	0.05	0.07	2.12	-0.046	-2.65	N	0.02	0.13	2.15	-0.016	-0.93	N
99d	0.05	0.08	2.13	0.04	0.05	2.09	-0.035	-2.05	N	0.02	0.10	2.12	-0.013	-0.75	N
99e	0.04	0.07	2.11	0.03	0.04	2.08	-0.029	-1.70	N	0.01	0.08	2.10	-0.011	-0.65	N
99f	0.04	0.06	2.09	0.03	0.04	2.07	-0.026	-1.49	N	0.01	0.07	2.08	-0.010	-0.58	N
99g	0.03	0.05	2.08	0.03	0.03	2.06	-0.023	-1.35	N	0.01	0.06	2.07	-0.009	-0.54	N
99h	0.03	0.05	2.08	0.02	0.03	2.05	-0.021	-1.23	N	0.01	0.06	2.07	-0.009	-0.50	N
99i	0.03	0.04	2.07	0.02	0.03	2.05	-0.020	-1.14	N	0.01	0.05	2.06	-0.008	-0.48	N

Table F11: Predicted Acid Deposition during 2041 (keq/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
1a	0.04	0.24	2.99	0.02	0.31	3.03	0.044	2.56	**Y**
1b	0.04	0.21	2.95	0.01	0.27	2.99	0.038	2.20	**Y**
1c	0.03	0.18	2.92	0.01	0.24	2.95	0.033	1.92	**Y**
1d	0.03	0.16	2.89	0.01	0.21	2.92	0.029	1.69	**Y**
1e	0.03	0.15	2.87	0.01	0.19	2.90	0.026	1.52	**Y**
1f	0.02	0.13	2.86	0.01	0.17	2.88	0.023	1.35	**Y**
1g	0.02	0.12	2.84	0.01	0.15	2.86	0.021	1.23	**Y**
1h	0.02	0.11	2.83	0.01	0.14	2.85	0.019	1.10	**Y**
1i	0.02	0.10	2.82	0.01	0.13	2.84	0.017	1.01	**Y**
1j	0.02	0.09	2.81	0.01	0.12	2.83	0.016	0.94	N
1k	0.02	0.09	2.80	0.01	0.11	2.82	0.015	0.86	N
2a	0.02	0.12	2.84	0.01	0.16	2.87	0.022	1.26	**Y**
2b	0.02	0.11	2.83	0.01	0.15	2.85	0.020	1.16	**Y**
2c	0.02	0.11	2.82	0.01	0.14	2.84	0.018	1.07	**Y**
2d	0.02	0.10	2.82	0.01	0.13	2.83	0.017	0.98	N
2e	0.02	0.09	2.81	0.01	0.12	2.82	0.016	0.92	N
2f	0.02	0.09	2.80	0.01	0.11	2.82	0.015	0.85	N

Table F11: Predicted Acid Deposition during 2041 (keq/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
2g	0.01	0.08	2.80	0.01	0.10	2.81	0.014	0.80	N
2h	0.01	0.08	2.79	0.01	0.10	2.80	0.013	0.74	N
2i	0.01	0.07	2.79	0.01	0.09	2.80	0.012	0.71	N
2j	0.01	0.07	2.78	0.00	0.09	2.79	0.011	0.65	N
2k	0.01	0.06	2.78	0.00	0.08	2.79	0.011	0.62	N
83a	0.60	0.94	3.54	0.27	1.29	3.56	0.019	1.07	**Y**
83b	0.25	0.37	2.62	0.11	0.50	2.61	-0.013	-0.74	N
83c	0.16	0.23	2.40	0.07	0.32	2.38	-0.013	-0.74	N
83d	0.12	0.18	2.30	0.05	0.24	2.29	-0.012	-0.69	N
83e	0.10	0.14	2.24	0.04	0.19	2.23	-0.011	-0.62	N
83f	0.12	0.17	2.29	0.05	0.23	2.27	-0.014	-0.80	N
83g	0.07	0.11	2.18	0.03	0.14	2.17	-0.009	-0.54	N
83h	0.07	0.10	2.16	0.03	0.13	2.15	-0.008	-0.49	N
83i	0.06	0.09	2.15	0.02	0.11	2.14	-0.008	-0.46	N
83j	0.05	0.08	2.13	0.02	0.10	2.13	-0.007	-0.43	N
83k	0.05	0.07	2.12	0.02	0.10	2.12	-0.007	-0.41	N
84a	0.54	0.83	3.38	0.24	1.15	3.39	0.012	0.69	N

Table F11: Predicted Acid Deposition during 2041 (keq/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
84b	0.47	0.71	3.17	0.21	0.97	3.18	0.005	0.28	N
84c	0.23	0.34	2.57	0.10	0.46	2.56	-0.009	-0.54	N
84d	0.16	0.23	2.38	0.07	0.31	2.37	-0.010	-0.55	N
84e	0.12	0.17	2.29	0.05	0.23	2.28	-0.009	-0.50	N
84f	0.10	0.14	2.24	0.04	0.19	2.23	-0.008	-0.46	N
84g	0.08	0.12	2.20	0.03	0.16	2.19	-0.007	-0.43	N
84h	0.07	0.10	2.18	0.03	0.14	2.17	-0.007	-0.39	N
84i	0.06	0.09	2.16	0.03	0.12	2.15	-0.006	-0.38	N
84j	0.06	0.08	2.14	0.02	0.11	2.13	-0.006	-0.35	N
84k	0.05	0.08	2.13	0.02	0.10	2.12	-0.006	-0.33	N
85a	0.71	1.14	3.84	0.32	1.57	3.89	0.050	2.89	**Y**
85b	0.27	0.40	2.67	0.12	0.55	2.66	-0.005	-0.30	N
85c	0.17	0.24	2.41	0.07	0.33	2.40	-0.007	-0.41	N
85d	0.13	0.18	2.30	0.05	0.25	2.30	-0.007	-0.38	N
85e	0.10	0.14	2.24	0.04	0.20	2.24	-0.006	-0.35	N
85f	0.09	0.12	2.21	0.04	0.16	2.20	-0.006	-0.33	N
85g	0.07	0.10	2.18	0.03	0.14	2.17	-0.005	-0.31	N

Table F11: Predicted Acid Deposition during 2041 (keq/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
85h	0.07	0.09	2.16	0.03	0.13	2.15	-0.005	-0.30	N
85i	0.06	0.08	2.14	0.02	0.11	2.14	-0.005	-0.27	N
85j	0.00	0.00	2.00	0.00	0.00	2.00	0.000	-0.02	N
85k	0.05	0.07	2.12	0.02	0.10	2.12	-0.004	-0.25	N
86a	0.58	0.91	3.49	0.26	1.26	3.52	0.025	1.47	**Y**
86b	0.21	0.30	2.50	0.09	0.41	2.50	-0.006	-0.35	N
86c	0.15	0.21	2.36	0.06	0.29	2.35	-0.006	-0.34	N
86d	0.11	0.16	2.28	0.05	0.22	2.27	-0.005	-0.31	N
86e	0.10	0.13	2.23	0.04	0.18	2.22	-0.005	-0.27	N
86f	0.08	0.12	2.20	0.03	0.16	2.19	-0.004	-0.24	N
86g	0.07	0.10	2.17	0.03	0.14	2.17	-0.004	-0.22	N
86h	0.06	0.09	2.16	0.03	0.13	2.15	-0.004	-0.21	N
86i	0.06	0.08	2.14	0.02	0.12	2.14	-0.003	-0.19	N
86j	0.05	0.08	2.13	0.02	0.11	2.13	-0.003	-0.18	N
86k	0.05	0.07	2.12	0.02	0.10	2.12	-0.003	-0.17	N
87a	0.53	0.82	3.36	0.24	1.14	3.38	0.019	1.12	**Y**
87b	0.23	0.33	2.56	0.10	0.45	2.55	-0.005	-0.30	N

Table F11: Predicted Acid Deposition during 2041 (keq/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
87c	0.14	0.20	2.35	0.06	0.28	2.34	-0.006	-0.32	N
87d	0.11	0.15	2.25	0.04	0.20	2.25	-0.005	-0.27	N
87e	0.08	0.12	2.20	0.03	0.16	2.19	-0.004	-0.25	N
87f	0.07	0.10	2.16	0.03	0.13	2.16	-0.004	-0.23	N
87g	0.06	0.08	2.14	0.02	0.11	2.14	-0.004	-0.20	N
87h	0.05	0.07	2.12	0.02	0.10	2.12	-0.003	-0.19	N
87i	0.04	0.06	2.11	0.02	0.09	2.10	-0.003	-0.18	N
87j	0.04	0.06	2.10	0.02	0.08	2.09	-0.003	-0.15	N
87k	0.04	0.05	2.09	0.01	0.07	2.08	-0.003	-0.15	N
88a	0.65	1.04	3.69	0.30	1.44	3.73	0.040	2.34	**Y**
88b	0.21	0.30	2.51	0.09	0.42	2.51	-0.004	-0.23	N
88c	0.13	0.18	2.31	0.05	0.25	2.30	-0.004	-0.21	N
88d	0.09	0.13	2.22	0.04	0.18	2.22	-0.003	-0.15	N
88e	0.07	0.10	2.17	0.03	0.14	2.17	-0.002	-0.12	N
88f	0.06	0.08	2.14	0.03	0.12	2.14	-0.002	-0.09	N
88g	0.05	0.07	2.12	0.02	0.10	2.12	-0.001	-0.08	N
88h	0.04	0.06	2.11	0.02	0.09	2.11	-0.001	-0.06	N

Table F11: Predicted Acid Deposition during 2041 (keq/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
88i	0.04	0.06	2.10	0.02	0.08	2.10	-0.001	-0.04	N
88j	0.04	0.05	2.09	0.01	0.07	2.09	-0.001	-0.03	N
88k	0.03	0.05	2.08	0.01	0.07	2.08	0.000	-0.01	N
89a	0.43	0.64	3.07	0.19	0.89	3.07	0.007	0.39	N
89b	0.18	0.25	2.43	0.08	0.35	2.42	-0.005	-0.28	N
89c	0.11	0.16	2.27	0.05	0.22	2.27	-0.004	-0.22	N
89d	0.08	0.12	2.20	0.04	0.16	2.20	-0.003	-0.17	N
89e	0.07	0.09	2.16	0.03	0.13	2.16	-0.002	-0.13	N
89f	0.06	0.08	2.13	0.02	0.11	2.13	-0.002	-0.10	N
89g	0.05	0.07	2.11	0.02	0.09	2.11	-0.001	-0.05	N
89h	0.04	0.06	2.10	0.02	0.08	2.10	0.000	-0.02	N
89i	0.04	0.05	2.09	0.02	0.07	2.09	0.000	0.01	N
89j	0.03	0.05	2.08	0.01	0.07	2.08	0.001	0.04	N
89k	0.03	0.04	2.07	0.01	0.06	2.08	0.001	0.09	N
90a	0.05	0.06	2.11	0.04	0.17	2.21	0.094	5.43	**Y**
90b	0.03	0.04	2.08	0.02	0.10	2.12	0.047	2.73	**Y**
90c	0.03	0.04	2.06	0.02	0.08	2.10	0.034	1.96	**Y**

Table F11: Predicted Acid Deposition during 2041 (keq/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
90d	0.02	0.03	2.06	0.01	0.07	2.08	0.026	1.50	**Y**
90e	0.02	0.03	2.05	0.01	0.06	2.07	0.022	1.25	**Y**
90f	0.02	0.03	2.05	0.01	0.06	2.07	0.019	1.09	**Y**
90g	0.02	0.03	2.05	0.01	0.05	2.06	0.017	0.97	N
90h	0.02	0.03	2.05	0.01	0.05	2.06	0.015	0.88	N
90i	0.02	0.03	2.05	0.01	0.05	2.06	0.014	0.83	N
90j	0.02	0.03	2.04	0.01	0.05	2.06	0.013	0.76	N
90k	0.02	0.03	2.04	0.01	0.05	2.06	0.012	0.72	N
91a	0.04	0.07	2.11	0.03	0.19	2.22	0.113	6.55	**Y**
91b	0.02	0.03	2.06	0.01	0.08	2.09	0.036	2.07	**Y**
91c	0.02	0.03	2.04	0.01	0.05	2.06	0.018	1.03	**Y**
91d	0.02	0.02	2.04	0.01	0.04	2.05	0.011	0.64	N
91e	0.02	0.02	2.04	0.01	0.04	2.05	0.007	0.43	N
91f	0.01	0.02	2.04	0.01	0.04	2.04	0.005	0.28	N
91g	0.01	0.02	2.04	0.01	0.03	2.04	0.004	0.21	N
91h	0.01	0.02	2.04	0.01	0.03	2.04	0.002	0.14	N
91j	0.01	0.02	2.04	0.01	0.03	2.04	0.002	0.09	N

Table F11: Predicted Acid Deposition during 2041 (keq/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
91i	0.01	0.02	2.04	0.01	0.03	2.04	0.001	0.06	N
91k	0.01	0.02	2.04	0.01	0.03	2.04	0.001	0.03	N
93a	0.29	0.49	2.77	0.13	0.66	2.79	0.016	0.90	N
93b	0.14	0.22	2.35	0.06	0.29	2.34	-0.008	-0.47	N
93c	0.10	0.17	2.27	0.04	0.21	2.26	-0.012	-0.70	N
93d	0.09	0.15	2.24	0.04	0.19	2.22	-0.014	-0.80	N
93e	0.08	0.13	2.22	0.03	0.17	2.20	-0.015	-0.86	N
93f	0.00	0.00	2.00	0.00	0.00	2.00	0.000	-0.02	N
93g	0.08	0.13	2.20	0.03	0.16	2.19	-0.016	-0.95	N
93h	0.08	0.12	2.20	0.03	0.15	2.18	-0.017	-0.96	N
93i	0.08	0.12	2.20	0.03	0.15	2.18	-0.017	-0.98	N
93j	0.07	0.12	2.20	0.03	0.15	2.18	-0.017	-0.99	N
93k	0.07	0.12	2.19	0.03	0.15	2.18	-0.017	-1.00	N
94a	0.25	0.42	1.86	0.05	0.38	1.63	-0.231	-13.37	N
94b	0.10	0.16	1.45	0.02	0.14	1.36	-0.096	-5.53	N
94c	0.07	0.11	1.38	0.01	0.10	1.31	-0.073	-4.19	N
94d	0.06	0.09	1.35	0.01	0.08	1.29	-0.062	-3.57	N

Table F11: Predicted Acid Deposition during 2041 (keq/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
94e	0.05	0.08	1.33	0.01	0.07	1.28	-0.055	-3.20	N
94f	0.05	0.07	1.32	0.01	0.06	1.27	-0.051	-2.94	N
94g	0.04	0.07	1.31	0.01	0.06	1.27	-0.048	-2.76	N
94h	0.04	0.06	1.31	0.01	0.05	1.26	-0.045	-2.58	N
94i	0.04	0.06	1.30	0.01	0.05	1.26	-0.042	-2.43	N
94j	0.04	0.06	1.29	0.01	0.05	1.25	-0.040	-2.30	N
94k	0.04	0.05	1.29	0.01	0.04	1.25	-0.038	-2.20	N
95a	0.27	0.46	2.72	0.12	0.63	2.75	0.022	1.26	**Y**
95b	0.12	0.19	2.31	0.05	0.26	2.31	0.000	0.00	N
95c	0.08	0.14	2.22	0.04	0.18	2.22	-0.004	-0.23	N
95d	0.07	0.12	2.19	0.03	0.15	2.18	-0.006	-0.36	N
95e	0.06	0.11	2.17	0.03	0.14	2.16	-0.008	-0.45	N
95f	0.06	0.10	2.16	0.02	0.13	2.15	-0.009	-0.53	N
95g	0.06	0.10	2.16	0.02	0.13	2.15	-0.011	-0.61	N
95h	0.06	0.10	2.17	0.02	0.13	2.15	-0.012	-0.70	N
95i	0.07	0.11	2.18	0.03	0.14	2.16	-0.014	-0.82	N
95j	0.07	0.12	2.19	0.03	0.15	2.17	-0.016	-0.94	N

Table F11: Predicted Acid Deposition during 2041 (keq/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
95k	0.08	0.13	2.21	0.03	0.16	2.19	-0.019	-1.12	N
97a	0.34	0.59	2.93	0.15	0.82	2.97	0.040	2.34	**Y**
97b	0.11	0.19	2.30	0.05	0.25	2.30	0.005	0.27	N
97c	0.07	0.12	2.19	0.03	0.16	2.19	0.000	0.03	N
97d	0.06	0.09	2.15	0.02	0.12	2.15	-0.001	-0.07	N
97e	0.05	0.08	2.12	0.02	0.10	2.12	-0.002	-0.12	N
97f	0.04	0.07	2.11	0.02	0.09	2.11	-0.003	-0.16	N
97g	0.04	0.06	2.10	0.01	0.08	2.10	-0.003	-0.19	N
97h	0.03	0.06	2.09	0.01	0.07	2.09	-0.004	-0.21	N
97i	0.03	0.05	2.09	0.01	0.07	2.08	-0.004	-0.23	N
97j	0.00	0.00	2.00	0.00	0.00	2.00	0.000	-0.02	N
97k	0.03	0.05	2.08	0.01	0.06	2.07	-0.004	-0.24	N
98a	0.26	0.44	2.70	0.11	0.61	2.73	0.025	1.46	**Y**
98b	0.08	0.13	2.20	0.03	0.17	2.20	0.002	0.10	N
98c	0.05	0.08	2.13	0.02	0.11	2.13	-0.001	-0.04	N
98d	0.04	0.06	2.10	0.02	0.08	2.10	-0.002	-0.09	N
98e	0.03	0.05	2.09	0.01	0.07	2.08	-0.002	-0.12	N

Table F11: Predicted Acid Deposition during 2041 (keq/ha/yr)									
	2019 Base			2041					
Receptor Number	From NO_2	From NH_3	Total Acid Deposition	From NO_2	From NH_3	Total Acid Deposition	change due to Local Plan $(PC)^2$	change as % of CL	Impact >1% of CL (Y/N)
98f	0.03	0.05	2.07	0.01	0.06	2.07	-0.002	-0.13	N
98g	0.03	0.04	2.07	0.01	0.05	2.06	-0.003	-0.15	N
98h	0.02	0.04	2.06	0.01	0.05	2.06	-0.003	-0.16	N
98i	0.02	0.04	2.06	0.01	0.05	2.05	-0.003	-0.16	N
98j	0.02	0.03	2.05	0.01	0.04	2.05	-0.003	-0.18	N
98k	0.02	0.03	2.05	0.01	0.04	2.05	-0.003	-0.17	N
99a	0.26	0.44	2.70	0.12	0.61	2.73	0.026	1.53	**Y**
99b	0.10	0.16	2.26	0.04	0.22	2.27	0.004	0.23	N
99c	0.06	0.10	2.17	0.03	0.14	2.17	0.001	0.03	N
99d	0.05	0.08	2.13	0.02	0.11	2.13	-0.001	-0.04	N
99e	0.04	0.07	2.11	0.02	0.09	2.10	-0.002	-0.09	N
99f	0.04	0.06	2.09	0.01	0.08	2.09	-0.002	-0.12	N
99g	0.03	0.05	2.08	0.01	0.07	2.08	-0.002	-0.14	N
99h	0.03	0.05	2.08	0.01	0.06	2.07	-0.003	-0.15	N
99i	0.03	0.04	2.07	0.01	0.06	2.07	-0.003	-0.16	N